

RICHARD SAMUELS: Hello, everyone. Hello. Earth to everyone. Good afternoon. I apologize for the feedback on the mic. We're going to get started. The irony, of course, is we're waiting for one speaker, and that speaker's from Harvard. I don't want to cast any aspersions, but there I did it.

I'm Richard Samuels, and I direct the Center for International Studies and I'm a professor in the political science department. And it's really a great pleasure to moderate today's Starr Forum, which is co-sponsored by the Center for International Studies by the MIT Japan program and by the US Japan Foundation.

Now, the US Japan Foundation is a first time partner of the Center for International Studies in one of these Starr Forum events. And we're delighted to be able to do this together. The USJF has provided grants totaling about \$100 million to deepen US Japan mutual understanding and friendship since its inception in 1980.

And I'm especially delighted to welcome my colleagues on the Foundation's board of trustees. They're attending this event. And to express our thanks to the foundation's chairman, Larry Fish, who's also a life member emeritus of the MIT Corporation. Larry, thank you very much.

[APPLAUSE]

And lest I neglect to thank the folks who did so much of the heavy lifting to get today's program off the ground, let me do that now. I want to acknowledge the hard work of Kelly Nixon, of the US Japan Foundation, as well as the work of Michelle English and Sabina [INAUDIBLE] of the Center for International Studies and Christine Pilcavage of the MIT Japan program.

So today four, there will be four, I promise, distinguished panelists who will explore what may be significant changes underway in Japan. And the word maybe is the operative term here and I want to call attention to it because it's the reason for the question mark in the title of today's symposium. Reinventing Japan Again? I'm really very eager to learn what our colleagues think about the idea of reinvention and how deeply the label applies to Japan today.

Now, as everyone who's familiar with Japan, and I know a lot of you in this audience are, which is great, you'll recognize that the notion of reinvention has been applied to Japan by generation after generation. It's been a familiar trope since the late 19th century when young reformers forced open Japan's doors to the rest of the world after 250 years of isolation.

And then after reinventing itself through a forced march to industrialization in the late 19th century, Japanese military leaders fancied that Japan's next reinvention would be as a great empire only to be forced to accept an alternative, which was the reinvention of a vanquished country as a small island trading nation and as a Democratic ally of the United States in the Cold War.

Now, in the nearly 80 years since then, change has always been in the air. Reinvention has always been in the air. There were record breaking years of high economic growth in the '60s that was followed by a burst economic bubble in the 1990s. And then talk of reset and reinvention and renovation and rebirth and revival again came to a head after the triple catastrophe in Northeastern Japan in March of 2011. But even 311, and that's the reference to that triple catastrophe, didn't pave the way to epochal change.

So here we are. We're still talking about change and reinvention. And maybe this is that moment. We'll find out. Our panelists will let us know if they think it is or not. They'll explore the changes underway in Japan across three domains. Business, security, social relations, and then undergirding each of these in public opinion. And so let me introduce them in the order that they're sitting here nearly and in the order of their presentations.

Ulrika Schaede is a professor of business at the School of Global Policy and Strategy at the University of California at San Diego. She'll kick things off by addressing the reinvention of Japanese business, which is the topic, actually a title of her most recent book from Stanford University Press. Professor Schaede is also the founding director of The Japan Forum for Innovation and Technology.

And she provides an enormous public good in the form of her weekly Japan Zoominar. It's a webinar series where she discusses contemporary Japan with scholars, business leaders, and industry experts. She's taught at the Harvard Business School, at the Haas School of Business at UC Berkeley, and we are delighted to welcome her here to MIT. Our second speaker--

[APPLAUSE]

Our second speaker needs no special introduction to MIT, at least. Eric Heginbotham is a national leader and the study of Asian security issues. He's an alumnus of the MIT political science department. And after stints at the Council on Foreign Relations and at the Rand Corporation, Eric returned here to his alma mater as a principal research scientist at the MIT Center for International Studies and Security Studies program.

He was the lead author of Rand's very influential US China military scorecard. Was that 2015, Eric, yeah? And also the co-author of Chinese and Indian strategic behavior and China's evolving nuclear deterrent. He's published numerous articles in Foreign Affairs, International Security, the Washington Quarterly, Current History, and elsewhere. He's currently working on a major study of Japanese military options for the 21st century.

Our third speaker is Mary Brinton. Let me skip over Mary. Hopefully she'll walk in while I'm introducing Kiyoo, and then we'll come back to Mary so she can hear her introduction.

Kiyoo will be the-- Kiyoo Tsutsui, Professor Tsutsui will be our fourth and final speaker. He's the Henry H. and Tomoye Takahashi professor of sociology and a senior fellow at the Freeman Spogli Institute for International Studies at Stanford University, where he's also-- it's where he earned his PhD and is a professor, as a professor in the sociology department. He was professor of sociology, Director of the Center for Japanese Studies, and Director of the Human Rights Center at the University of Michigan before he went back to Stanford.

His research has appeared in the American Sociological Review, the American Journal of Sociology, Social Forces, and other leading social science journals. His books include *Rights Make Might, Global Human Rights and Minority Social Movements in Japan*, which was published by Oxford University Press. I asked him to help us make sense today of reinvention from a bottom up sociological perspective.

And he'll share his public opinion data to help us get a feel for how the Japanese people-- there is Professor Brinton. Wonderful. Get a feel for how the Japanese people are responding to the current spate of changes in the economy, the shifts in Japan's security environment, and to efforts by successive Japanese governments to improve gender equity in all developments that affect the general population very directly.

Our third speaker, Mary Brinton, will speak to us about the reinvention of Japanese society or the lack thereof. She'll do it with special reference to the role of women. Professor Brinton is the Reischauer Institute Professor of Sociology and Director of the Reischauer Institute of Japanese Studies at Harvard. She joined the Harvard faculty in 2003, having previously taught at the University of Chicago and at Cornell University.

Her research and teaching focus on gender inequality, labor markets and employment, social demography, and contemporary Japanese society. She's the author or the editor of a great many important books, including *Women and the Economic Miracle*, *Gender and Work in Post-War Japan*, and *Women's Working Lives in East Asia*. She was an undergraduate at Stanford and earned her PhD in sociology at the University of Washington.

So that's the lineup and that's the agenda. And we started a bit late, but I promise to leave sufficient time for Q&A. So with that, let me ask Professor Schaeede to kick us off here. Thank you very much for coming.

[APPLAUSE]

**ULRIKE
SCHAEDE:**

Well, thank you, Professor Samuels, for his wonderful introduction and both MIT and the US Japan Foundation for flying me out for this wonderful event. I'm excited to be here. And there are my PowerPoints. Excellent.

So Dick said everything that you need to know about me. So let me go right back in. I just wrote a book recently titled *The Business Reinvention of Japan*. And so I want to take my 15 minutes here to tell you what's in it. So please buy it, but you don't have to read it after this. Or maybe you do.

So the book is about how Japan-- basically how Japanese business has responded to the rise of China and changed away from the old Showa business model to something new. I make three main arguments. One is that Japan once again matters. And it matters because it is doing this reinvention without the slash and burn and mess and political uncertainty and all of those things that might be associated with such a change in places like the United States.

I develop a new theory about the strategy that Japanese companies are developing. And I'm going to talk to you about that in my 15 minutes today. Namely, how Japanese companies are trying to figure out how to profit, not only compete with but profit from the rise of China by something I call an aggregate niche strategy.

And then the remainder of the book that I will not talk about today actually goes into the details of how Japanese companies are managing employment practices, job mobility, and new trade offs around work style, workspace innovation, and so forth and so on. So let me go into-- oh, and by the way, it's been translated into not [INAUDIBLE] or whatever it has been reinvention translated into in the past. It's [INAUDIBLE] is the Japanese title.

So whenever I go to Japan, I get a lot of negativity. So there's all these things are bad with Japan. And I don't need to read this list. You've heard it. Deflation, stagnation, GDP, women, and all these bad things. And there's a lot of negativity there and most of it is true.

But then we have a puzzle. And the puzzle is if all of this is true, how can it be that after 30 years of stagnation or whatever that thing is called, Japan is still the third largest economy in the world? It's only the 11th largest country in the world. So something must be working. So I wrote this book with the notion to not explain what's wrong about Japan but what's actually explaining this phenomenon. So what is it that's working?

And so now you might think, well, wait a minute, wait a minute. So she says the negativity is true, but then this is also true. So how can both of these be true at the same time? And I think it's a matter of framing and that the current situation in Japan is an expression of the 20/80 principle where, you may have heard this, 20%-- so 80%-- 20% of your daily activities explain 80% of what you produce in a given day. And the rest is running around and catching the bus and that sort of thing.

And I think that the story that I'm going to tell you is about the top notch, leading Japanese companies that explain why Japan is still a very strong economy. And that doesn't mean that there aren't poorly performing companies in Japan, of course.

And so let's focus and let's Zoom in on what are the top players in Japan doing today? First of all, why do they have to reinvent? There are lots of reasons. I've already mentioned the rise of China, which actually was first the rise of Korea, then the rise of Taiwan, and then the rise of China at the same time that supply chains were globalizing. This changed the cost competition in Northeast Asia. And it was clear that Japan could no longer compete in making toaster ovens or blow dryers or even televisions for households.

And then comes, of course, a digital transformation, which is an opportunity for Japan, which is, of course, good at factory automation and those sort of things. And then global shocks. Meanwhile, domestically labor shortage and corporate governance changes that put pressure on profitability and so forth and so on. So lots of reasons why Japanese companies have to reinvent.

And what are they reinventing from? This is something that Dick just mentioned. Sort of the Showa business model. So what is this moment that I'm looking at? It's this change from the post-war economic or business model to today. And when I say Showa model, I refer to the old days of industrial policy that rewarded size. The bigger the better. So companies diversified. At the high point, Hitachi had more than 1,000 subsidiaries and I think Toshiba had more than 900. And this diversification was actually rewarded by the stock market. So Nippon Steel got into semiconductors and that sort of thing.

The bubble economy put this into new heights. Then that whole thing collapsed. And at the beginning of the century, we saw a first round of choose and focus. And that was when all of this excitement about reinvention. I was excited as well. I wrote a book by that title. That was my translation of [SPEAKING JAPANESE] which was the business phrase at the time and how great it is that finally these conglomerates are deconglomerating, whatever that word is.

And then came the global financial crisis put a halting stop to all of this. And we now know that whatever choose and focus, refocusing we saw in Japan 20 years ago was basically just low hanging fruit. So Nippon Steel divested the semiconductors, but that didn't make Nippon Steel a better steel company yet.

So we are now at this challenge of that there's still too many conglomerates. And in 2019, there was an estimation that there were 250 or more companies with more than 50 subsidiaries. They're trading at a conglomerate discount at the Stock Exchange. They're not focused. But the kicker is no matter what Japan does, it will never be as big as China.

And so even the largest Japanese company will not be able to make toaster ovens in the same way their Chinese companies can do. So there's only one way forward and that is relinquish that market, identify the new cost competition, and realize that it is in higher margin input materials.

So Sumo. I see many people in the room who will remember the old days of Konishiki and Akebono. Those were massive men in the late '80s when Sumo was still the real big thing. And my favorite Sumo at the time, I could quiz later on, but my favorite Sumo was actually Mainoumi. Mainoumi was actually a little bit shorter than I am. And so he had to put some silicone in his scalp so they could actually cross the hurdle of the association. And Mainoumi beat all of these people.

And I think he's a really good expression of what's going on in Japan right now. Namely Mainoumi became known as [SPEAKING JAPANESE]. The department store of techniques. And Sumo has all of these list of techniques. And so Mainoumi had actually allegedly mastered 37 different techniques, which he used to pull over. So in this case, he's pulling the leg-- oops, that is my-- it's not my phone. So he pulls the leg and then whatnot and pushes this guy over.

So I have a bubble chart that will make my point. And it looks complicated, but no worries. I'm going to show it here, but maybe you can see it over there. So what you see here is global market size. This is a chart that METI made together with NEDO. So the global market size of some 900 or so product categories. And the combined global market share of Japanese companies here, so orange is automobiles. And then these are hybrids. So we know that Japanese companies have 1/3 of the global market size and it's a crazy large market, 10 trillion or something right.

So what I'm interested in this chart are these little dots here where Japanese companies combine to 100% market share in something. And so we have here electronics and auto parts and semiconductors. So there are a large number of little dots here, the Milky Way, where Japanese companies combine to over 50% of global markets.

Precisely the number is-- this is not an academic research. So METI went in and identified 900 product categories where they wanted to know what's the market share. And they found that Japanese companies have a combined market share of over 50% in almost 500 of these categories. And all of them are high tech or deep tech, critical input parts and components to something else.

Like the screen of your cell phone. If it's any good, that film, that brightness film or polarizer film is made in Japan. There are some steps in semiconductor production that are 100% owned by Japanese companies or dominated. So basically, we couldn't make semiconductors without Japan.

And so now you might say, well, that's cool. But doesn't every country have this? I mean, isn't this normal? Oh yeah, and by the way, this is where the money is. Because if you have more than 80% global market share, you can charge whatever you want to charge.

Oh, and one more point. These niches are too small for China quite yet. Eventually some Chinese company will figure this out or copy or whatever. But right now it's something that Japan and only Japan can do. That's why they have this dominant market share.

So no, this is not normal. This is South Korea. Blue ocean. Basically this is cars and semiconductors, of course. This is the United States. Yep. A bunch of bubbles in semiconductors and pink is biotech. So yeah, so a little bit more. And the final of my bubble starts with this. It's a recent development. This is 2006 Japan and this is 2016 Japan.

So what these bubbles tell me is that Japanese companies are moving into deep tech specialized fields. Each of these markets is about 5 billion, which is-- so we're not talking small firms. But for a large firm like, say, Hitachi or something like that, 5 billion is not that much. And if you have 50% of that market, it's 2.5 billion. But if you have 10 of these markets, then suddenly we're talking 20 billion, 30 billion, and it's a big thing.

So I'm calling this the aggregate niche strategies. So moving out of consumer end products. So no more TVs. Used to be go into somebody's living room, it's a Sony. Now it's no longer a Sony. And most people think that's horrible. Japan lost it. I think that's exactly the right thing strategically, because Sony should not be making televisions.

In fact, Sony is one of these bubbles. Has a 65% market share in CMOS sensors, which are vision sensors for robotics. And so they are an integral super provider to digital manufacturing. And that is exactly the right way to go, because there's no money in televisions. There's a lot of money in CMOS chips.

OK, so very importantly, this is not a hidden champion story of small players. This is the new strategic thrust of Japan's largest companies. I'm talking Hitachi, JSR, Showa Denko, Kaneka, Showa Denko is now Resonac or something, Sony, Panasonic, ADC, NEC even. There are a lot of these companies where we thought they've lost it refinding their new position and they're reinventing. It takes time. It's slow. But slow does not mean stagnant. So they're going very carefully about this. They're not laying off a ton of people. They're retraining people they're kind of very carefully arranging this, which you could argue is a bad thing. I would argue is a good thing.

Fujifilm, just one example. Kodak and Fuji, of course, were head to head only 20 years ago. And now basically Kodak is gone. Fujifilm is no longer a photo film. They changed their name from Fuji Photo Film to Fujifilm. And they are making films that you're looking at every day in your computer screen. Also imaging and health care.

OK. So there is no-- you remember the Intel inside sticker? There is no Japan inside sticker on your computer. But that doesn't mean there's no Japan inside. Your car probably would not start in the morning without a product from Japan. Your nest-- whatever-- household, what is it, thermostat has a thing from Japan in it. That means that Japanese companies are now anchoring the supply chains in Northeast Asia.

And I have more on this, but I think, Dick, I'm running out of time, so I will just say one more thing on the trade thing. This is four year old data, but directionally this is still true. Japan and China are roughly equal in trade. And South Korea and Taiwan have a trade deficit with Japan and China has a trade deficit with South Korea and Taiwan. And what they're trading are, of course, these input materials for iPhones and computers and so forth.

I could say more about not looking at exports, but I think I'm really out of time. So let me stop here. And if you have questions on why we should look at Japan's global production network, I can answer that later. Thank you.

[APPLAUSE]

RICHARD That was perfect. Well done.

SAMUELS:

ERIC Do you have a clicker? Oh, there it is.

HEGINBOTHAM:

RICHARD Thanks.

SAMUELS:

ERIC OK. So we're one for one on reinvention.

HEGINBOTHAM:

[LAUGHS]

We'll see how we do after security. So as Dick said, I'll be speaking to this question of reinvention on the security and military side of the house but really only with the understanding that Dick will answer any difficult questions. Most of what I'll say today is, in fact, based on a paper that the two of us wrote together with Sam [? Leiter, ?] who's in the audience over there in the corner. He can raise his hand.

To start at the beginning, historically Japan has reinvented itself after spectacular failure or when it was clear there were no good options. So Dick already told you that story. Today, as we know, a Democratic Japan is more capable of change under less duress. But necessity remains the mother of invention across political systems, and certainly Japan today confronts an evolving balance of power that provides plenty of motivation for change.

Living in the moment as we are, it can be tough to judge the degree or magnitude of change. Are we witnessing reinvention or something more partial or incremental? But here I think the slow evolution of Japanese security and military policy over time has accelerated over the last several years to become something that certainly looks a lot like reinvention. So it's not complete, but it certainly looks a lot like reinvention.

The outlines of that reinvention are evident in three new documents that were issued by the Japanese government in January. A new national security strategy, a new national defense strategy, and a new 5 and 10 year defense buildup program document. This transformation, as I said-- oops.

All right, I am pressing buttons and the slides are not moving. Maybe you can try. If we aim it up there. All right. Anyways, if someone at the computer-- oh, there we go. There we go. There we go. OK, thank you.

All right. So if we look at the evolving balance of power, defense budgets provide us with an easy if absolutely imperfect metric. As late as the year 2000, Japan's defense spending was, according to calculations by the International Institute of Strategic Studies, higher than China's. Today China spends about five times what Japan does on defense.

And although Japan enjoys the benefits of having built up capabilities over decades, military inventories increasingly reflect the gap in those budgets. In 2010, we might have described military inventories across the board as roughly comparable. Today, China has a clear lead and in some cases a dramatic advantage. And it's generally closed the gap in quality as well as quantity.

Japan, of course, also lacks nuclear weapons and faces potential nuclear threats emanating not just from China but also North Korea. And if I heard correctly on the news today, North Korea may have just tested another ballistic missile. So if these challenges appeared serious but somewhat academic before February of 2022, the invasion of Ukraine certainly highlighted for many Japanese that war can occur even if no choice for war is made.

So in the 2022 Shangri-La dialogue, Prime Minister Kishida warned assembled defense ministers that Ukraine today may be East Asia tomorrow. And as we argue in our paper, many of the changes that we've seen over the last year already had political support. Some of them were already in the works long before the war. In that sense, they're less a direct response to the conflict in Ukraine than they are a response to strategic and political circumstances closer to home.

Conservative politicians associated with the ruling Democratic Party have sought to supplant the economic first Yoshida doctrine with a form of military realism that is now being called the Abe doctrine. In short, these folks want a more muscular Japan and over the last two decades have moved in that direction.

They've lifted Japan's prohibition on arms exports, approved the military use of space, adopted legislation on collective security, and begun to increase defense budgets. But the war in Ukraine did certainly have a profound impact on public opinion in Japan and public support for change and the pace of that change has accelerated accordingly over the last year.

So what does this reinvention look like? From a strategic perspective or a perspective of grand strategy, we can identify at least four developments in the new raft of documents that were issued this year by the government. The first is that Japan has moved more vigorously to embrace the US alliance as the foundation of its security.

Now, the alliance has always been central to Japanese security, but Japanese attitudes about the classic alliance dilemma concerning entanglement and abandonment have shifted in the last year very significantly. So surveys conducted in 2020 showed that the dominant concern among the Japanese public was entanglement. In other words, the risk or threat that the United States might somehow embroil Japan in a war that was not of its own choosing.

But surveys conducted since that war or since the outbreak of the war show that the concern among the Japanese public has shifted to abandonment or a fear that if war is thrust upon Japan, the United States might not, in fact, show up. So as a result, to buttress the alliance, which is seen as more indispensable than ever, the government has moved to take measures both to deepen the alliance itself as well as to show that Japan is doing its part as an alliance partner.

So the 2022 national defense strategy laid out new plans for deepening military cooperation in various areas, information security, cyber security, the military uses of space, and preparations for joint responses to crisis, which I'll come back to in a moment.

A second theme is increased external balancing or the development of closer security ties with other partners, particularly in Asia, but also with European states. For the most part, I would characterize that as hedging into the alliance rather than hedging against the alliance or hedging against failure or potential failure of the alliance. To be sure, as I said before, there is a degree of angst about US reliability. And there is as a result a new discussion, a lively discussion, of a so called Japanese plan B for if the alliance should fail.

But virtually all participants in that discussion conclude there's effectively no real viable substitute for American power even through collective action. Nevertheless, expanding security partnerships in Asia, especially with other US allies and partners, can supplement and solidify the alliance and at least do some good in the event that the alliance declines.

So Tokyo has pursued partnerships in Asia through the free and open Indo-Pacific initiative, the so called FOIP initiative, introduced by Prime Minister Abe in 2016. The Japanese government now holds what are called two plus two meetings. Those are meetings of defense and security. I'm sorry, defense and foreign policy officials with Australia, the United Kingdom, the Philippines, Germany, India, Indonesia, and France. So it's quite a list.

Australia is a particular focus. The 2022 national security strategy states that Japan will build, quote, "the closest cooperation next to the US alliance with Australia." But Britain is also a very important partner here and Japan will be building its next generation fighter in a consortium with the United Kingdom and Italy. So that's a huge change if you think of past procurement of Japanese combat aircraft.

A third strategic adjustment is a concerted increase to defense budgets. Back in 1976, Prime Minister Miki imposed the policy limit of 1% of GDP as a spending limit on defense. That limit, of course, was never legally binding or ironclad, but it was a guide. But former Prime Minister Abe has sort of stiff armed that limit in a way that was much more forceful than his predecessors, and defense spending has increased every year since the inauguration of his second term.

Again, the 2022 national security strategy declared Japan will match the NATO target of 2% of GDP spending on defense by 2027. Now, if that happened, that would be just an extraordinary development. We can discuss whether or not that will come true. In the meantime, I'll charge on.

So the fourth and last change is emphasis on the defense of Taiwan. In April of 2022, former Prime Minister Abe asked the United States to end the strategic ambiguity under which the United States does not explicitly stipulate whether or not it would defend Taiwan in the event of an attack on that country. Prime Minister Abe said then there can no longer be any room for doubt in our resolve concerning Taiwan. And Japanese documents, official defense documents, now routinely link Japan's security to that of Taiwan.

I would emphasize here that Japan has made no political commitment to participate in a Taiwan war or even to permit US basing in that event for active operations against China. Though I think it would almost certainly do the latter. In other words, provide basing for US forces.

OK, moving on from strategic change and adjustments to changes in terms of military operational capabilities. Those three new strategy documents also lay out an ambitious plan for improving Japan's military capabilities. Here too national political and bureaucratic politics as well as the evolving security environment have played an important role in shaping the agenda. Japan's new documents lay out seven broad priority areas that are up on the board here.

The first is improvement to stand off defense capabilities. Here we're effectively talking about the acquisition of long range missiles. The second is integrated air and missile defense. That's the acquisition of additional Aegis warships, Patriot, and Japanese domestic air defense systems. Third is the development of improved unmanned defense capabilities, UAVs and such.

Fourth is the improvement in cross domain capabilities. That is improvements to Japanese space, electromagnetic, and cyber. Fifth is strengthening command and control. Sixth is mobile development capabilities, essentially air and sea lift. And seventh is in the area of sustainment and resilience.

Just a few general comments before closing about this list. First, the list itself doesn't really cover many of the most expensive items that are actually in the budget here. So here up on the board, we see F-35 aircraft warships and armored vehicles. Those actually take up a majority of the Japanese budget. So the documents generally highlight new capability areas rather than the improvements to existing ones. But it should be noted here that Japan's air and naval capabilities in particular are getting some important upgrades.

Second, the list does address some important gaps or weaknesses in Japan's capabilities. So cyber is just a single example. But the Cyber Defense Command was not established until 2022 in Japan and remains tiny today. It's got about 500 personnel associated with it.

For comparison, US Cyber Command is something like 6,500 strong. And on top of that or really at the base of that, we have the NSA, which has tens of thousands. The Japanese plan will increase Japanese personnel in this area by about 400%. So important improvements to those weaker areas of Japanese security.

A third point is that some defense requirements get a lot more attention than others and not necessarily entirely as a function of an objective assessment of operational requirements. Japan has many urgent defense needs and some get only scant attention in these documents. And I think it's important here to sort of listen for the dogs that aren't barking. The contrast between missiles and top place or strike and improved resiliency, which is sort of listed in last order of priority, is particularly stark.

So the MOD's wish list, the Ministry of Defense's wish list, includes seven different types of long range missiles. The justification for those systems has changed dramatically over time, starting with an initial focus on countering North Korean nuclear threats and now centered on conventional war fighting with China. So dramatically different mission.

But despite this, the answer has remained the same throughout, missiles, missiles, and more missiles without really much discussion of specific targets, concepts of operation. In other words, how these missiles would be used or priorities, how you choose which missiles. There are lots of missiles you could acquire, and Japan is sort of going after many of them.

Missiles hit all the right notes with political and bureaucratic imperatives, which are calling for a more muscular Japan and one loaded with offensive capability as well as defensive capability. Resilience, on the other hand, does not check those same boxes but is from an objective perspective an equally urgent requirement. And here I'll just give a single example as well. That's airbase defense.

So China has a very large inventory of highly accurate ballistic and cruise missiles, many of which are topped with sort of cluster munitions, distributed munitions on top. Parking areas for aircraft at air bases are generally small. The footprint of the area covered by these Chinese missiles is quite large. So China has enough missiles to cover all of the parking areas for aircraft on all of Japan's air bases several times over.

Now, there are a variety of means that could be taken to improve resilience in the face of that threat. Building aircraft shelters, these large concrete shelters, dispersion, concealment, mobility, and missile defense. Currently there are enough shelters in Japan or hardened aircraft shelters for about 3 of Japan's 13 fighter squadrons, all of which were built in the 1980s, and there are no plans to build any new ones.

So to wrap up here, because I think I'm getting to the end of my-- there on the right is an overhead photo, anyway, of one of these hardened aircraft shelters. So to wrap up, returning to the larger theme, the bottom line, I think, is that we do see reinvention on the security side. Probably the biggest single element in that is growth in the defense budget, which will open up all kinds of new possibilities, assuming that it does come to pass.

At the same time, we should understand that although we've seen accelerated change, the impetus for change has been around for a while. And the biggest changes that we've seen are those that fit comfortably with pre-existing political and organizational imperatives, not necessarily those driven by some mystical or inherently objective assessment of the threat.

Last sentence is just no countries plan their defense on strictly objective means. The bureaucracy is always a factor. So I'm not singling out Japan in this sense, but it's nevertheless true. So with that I'll close, and I don't know where our third speaker went. There she is. All right.

[APPLAUSE]

MARY Let's see. Slides?

BRINTON:

RICHARD Yeah, slides are--

SAMUELS:

MARY Ah, OK. I had moved so I could see the slides. So now I have to turn around to see my own slides. So I think I may
BRINTON: move a little bit, actually, if that's OK. I'm really glad that I'm the last speaker on the panel.

Oh well, yes, yes. Kiyo is going to wrap everything, tie everything together. I'm the last thematic speaker. Because I think the order that Dick established for us makes sense. And also I work at the other end of Cambridge and I don't know this end of Cambridge, especially in terms of parking. So I came in just as Dick was introducing me. I was in the back of the room. But I didn't hear the overall framing, but I have great trust in Dick's judgment of how he put all this together. Now, is it going to work if I move so that I can see my slides better?

RICHARD It should.

SAMUELS:

[SIDE CONVERSATION]

MARY I don't work from notes. I work from my slides. So I'm going to talk about a number of contradictions that I see in
BRINTON: Japanese society. There are many, many. We've heard about some of them. Contradictions in terms of what's going on in the labor market and to a little bit of an extent in households with regard to gender and gender relations.

So we've already heard from the other panelists about some of the big challenges that Japan is facing in the early 21st century. And I'm going to frame my talk by starting with two. One is the demographic challenge. So as most of us in the room know, among major post Industrial democracies, Japan is the most rapidly aging nation.

Currently close to 1/3 of the population is over age 65. And Japan has the lowest ratio of working age adults to adults over 65 years old. This has implications for how many people are paying into the pension system, what's going to happen in terms of sufficiency of elder care in future years, and so forth. And the demographic challenge is very closely related to the economic challenge.

So Ulrika told us about a lot of the positives, the things that are happening in Japanese business and industry. But she started with the more negative general picture, which is there have been decades of slow economic growth. Japanese productivity overall remains very low compared to other OECD countries. The national debt is about twice what our national debt is in the United States. And there are labor shortages.

And the current labor shortages really result from the fact that the Japanese birthrate has been below population replacement level since the late 1970s. So there's a great deal of hand wringing about the low birthrate, especially right now in Japan. But this is a problem that started a long time ago, and it hasn't gotten any better. And I'll show you the birth rate trajectory in a moment.

But government policies, social policies in the last 10 to 15 years, I would say, have been designed to simultaneously address two goals. And one is to raise the labor force participation rate of married women, especially mothers, because that was hypothesized, and in fact, it's happening, to be able to alleviate some of the current labor shortages.

And we can hearken back to former Prime Minister Abe's womenomics policy. Various translations from Japanese, but one translation is the policy was aimed to create an environment in which women find it comfortable to work. And then policies have been in place for a long time and they varied over the years but have been quite extensive to increase the country's birthrate. Because again, if the birth rate increases, that will provide more youth and vitality to the economy and will possibly allay labor shortages in the future.

So as I said, the birth rate is of great political importance these days. Prime Minister Kishida's policy speech at the opening of the ordinary session of the Diet in January of this year, again, translation to English, he said our nation is on the cusp of whether it can maintain its societal functions. That's a pretty awkward translation from the Japanese. But it is now or never when it comes to policies regarding births and child rearing. It is an issue that simply cannot wait any longer.

So both of these, the labor force participation rate of women, the labor supply of women to the economy, and the low birth rate have been very important foci of policies. And indeed, the Japanese government has talked about the fact that female labor force participation has come up a lot and especially if we look at the proportion of mothers who are employed.

So it's been of note that the Japanese maternal labor force participation in Japan has now exceeded that in the US. So that's a fairly significant, I would say quite a significant change. Sweden's female labor force participation, of course, has been high for many decades.

And also we can really see this if we look at the proportion of Japanese wives now who continue working after they have their first child. Now, 80% of women who are in employment positions that allow them to take childcare leave take childcare leave. And this is a tremendous change, a huge change, I would say, in Japanese society. In the early 2000s, about 40% of women stayed in the labor force after they gave birth and now it's up to 70%. And a lot of this indeed is due to workplace policies that have been developed.

This is the birth rate. And you can see, as I said, by the mid to late 1970s, the Japanese birth rate fell below what demographers call population replacement level and it has never recovered. And from my point of view, it's really kind of stabilized at about 1.3. That's not the worst in the world. South Korea is much lower. Singapore is lower. Everywhere in East Asia is very, very low. But it's certainly not enough to really keep productivity and the economy going in the absence of immigration. It's very difficult to do that.

Now, you could say the kind of old argument was, well, if women participate more in the labor market, they're not going to have babies. And indeed if we look at this relationship in 1980, there was a negative relationship between the birth rate, which is along the horizontal axis, and female labor force participation rate on the vertical axis.

In other words, there was a slight negative relationship between the two. So the countries with the highest rates of female labor force participation, especially northern Europe, had the lowest birth rates. So this was an economic theory championed by Gary Becker a long, long time ago about the trade offs. And this is, of course, at a big, big aggregate level. But the trade offs for women of being in the labor market versus having more kids.

By 1990, it looked like this. And so demographers were quite amazed when they realized this. And this has continued. So the relationship-- this rarely happens in social science, I think, when a relationship flips and we have something entirely new to explain and talk about. And this has continued to 2021.

And I'm going to blow this up larger in a second, because what's happened, as you can see, is birth rates have been compressed. They're low everywhere in the post Industrial world and female labor force participation has gone up everywhere in the post Industrial world. But you can see by the regression line that is still a positive relationship.

So if we blow this up a bit, you can see it better. So South Korea, Italy, low birthrate, low female labor force participation rates. And then you can see the scatter of other countries. And Japan is a little bit on the left hand side. But European demographers who are-- before East Asia joined the ranks of countries with very low birthrates, European demographers were very, very focused on low birth rates. American demographers are not very concerned yet because our birth rate is still relatively high, although it's beginning to come down.

So European demographers looked at these changes and said, well, how do we explain it? And basically the explanation is that countries that make it possible for women to be in the labor force and to have kids are the ones that are going to kind of be thriving in the 21st century. And policy is part of the answer, but it's by no means all of the answer.

But what do we do? What do we see when we go back to the Japanese government's goals? Labor force participation. Check that one off. Yes, it's increased. Birthrate, as I showed, has not increased. And I argue that a crucial link between these two goals is gender equality. And I'll show you in a moment that Japan has not gone quite as far as, well, I don't know if I expected it or not 40 years ago.

But anyway, it's very depressing every year for government officials in Japan to look at Japan's ranking among all countries in the world. In terms of gender equality, Japan ranks 116 out of 146 in its level of gender equality. There are no post Industrial countries close to Japan actually in this ranking. It's all what we used to call developing countries, poor countries. Japan is the only post Industrial country.

In fact, it ranks higher than 100. And the principle reasons are gender inequality in the labor market. Japan ranks 121 out of 146, very close to the bottom. And even closer bottom in terms of political empowerment. The other two parts of this index are health and education. And Japan is wonderful on those too. But participation and holding authority, positions in politics and in business and commerce, Japan has not raised. It's actually fallen over time relative to other countries.

Now, let me show you a few facets of gender inequality in the labor market and then I'm going to switch to households just for a moment. So if you break down male and female labor force participation by education, Japan has the largest gap along with Turkey, which I don't show here, between the percentages of highly educated men in the labor force and highly educated women.

So there's a 20 percentage point gap between the labor force participation of highly educated men and women in Japan. This is larger than the OECD average at the right. And again, the only country that's similar to this is Turkey in the OECD.

Wages. Japan and South Korea are the two countries with the largest wage gap. There are lots of complications of, I mean, complexities in looking at wage gaps. So I'm not going to dwell on this. But when I was in Japan three weeks ago, I happened to see this column. Japan ranks second worst in glass ceiling rankings. And lo and behold, Korea is the only one that is worse.

So households. Japanese women spend five times as much time on unpaid work as Japanese men. And there you can see again Korea and Japan are the twin cases in this regard. And I showed you graphs of how female labor force participation and the birth rate are correlated at a highly aggregated level.

This is what it looks like if we look at the share of household work that women do and the birth rate. Japanese women, Korean women spend around five times as much time on unpaid work in the household. And there's a strong correlation, negative correlation with the birth rate. So countries where men and women are somewhat more equal in their unpaid labor participation, housework and child care, have higher birth rates.

Now, I've showed you a lot of aggregate figures. But basically, the bottom line when you look at married couples, fertility within, births within the context of marriage, many, many Japanese women are doing kind of a second shift of unpaid labor at home even if they're working full time. And the percentage when you look at the micro level, the percentage of household labor that women are doing actually varies very little according to whether they work outside the home or not in Japan. And this simply makes it very exhausting to have the second or third child.

But not everyone in Japan is marrying. And in fact, the very high rate of singlehood in Japan is one of the things that's keeping the fertility rate very low. Japan has the highest percentage of never married men and women in their 40's in the world. It's gone up very rapidly. So we also need to think about how gender relations are affecting marriage.

And I'm going to run out of time, but let me just show you this, because it goes along with what's happening in the labor market. Between 1992 and 2021, the proportion of Japanese single men saying that they would prefer to have a wife who stays employed after they have kids, after the couple has kids, has risen from around 10% to close to 40%.

And the proportion of men, the green bars, who say that they want a quote, [SPEAKING JAPANESE] stay at home wife, has gone down to 8%. So men are actually looking for, by and large, wives who can contribute to the household income. And women are doing that, but the division of labor at home has not changed. And many issues in the workplace remain.

So this is all explained with a lot of other things in the book I published in September in Japanese. And this book really emphasizes social norms to a degree that I haven't been able to talk about in the context of today. But social norms that support gender inequality and a male breadwinner model of the family. And then I ask whether-- the title of the book is *Can We Break The Social Norms That Have Led To The Low Birth Rate*. And I don't know why this is not going forward.

But anyway, so this book shows the kinds of aggregate data that I've talked about and a lot of-- it's also based heavily on interviews, in depth interviews with Japanese men and women, Swedish men and women, and American men and women. So I can talk more about the qualitative feel of all of this if there are questions. Thank you.

[APPLAUSE]

[SIDE CONVERSATION]

**KIYOTERU
TSUTSUI:**

I will try. I still have 15 minutes? I'll try to be quick. Thank you for having me. I'm Kiyoteru Tsutsui. I go by Kiyotero. I'm delighted to be a part of this panel of distinguished scholars on Japan. And thank you to Dick and the MIT Center for International Studies for this invitation. And thank you the US Japan Foundation board members. I'm a proud member of the US Japan leadership program, a signature program of the US Japan Foundation. So I need to represent here.

So it's fascinating to hear about reinvention of Japan and the three different domains that the previous speakers talked about. And the Japanese have heard about how they need to change, reinvent themselves, as Dick alluded to earlier, for many decades by now. And for Japan to change, and we heard some significant movements, improvement, reinvention in some domains, but not so much in others.

And for Japan to really reinvent itself, again, the public has to get on board, especially on the issue of gender but also on defense and the economy business. The same problem. Is it moving? Computer. Where is computer?

And when Dick kindly invited me to speak here, he asked me to talk about the Japanese public opinion. It was a perfect timing, because I direct the Japan program at the Stanford Asia Pacific Research Center. And we just launched a new periodic public opinion survey in Japan called the Stanford Japan Barometer. It's brand new. So new that it's not reacting to my commands.

[INAUDIBLE]

So this is a periodic review, a periodic survey in Japan. And it's somewhat unique in that there are a lot of surveys of Japanese public opinions done by newspapers in Japan and they are very useful, informative. But we wanted to do something a little bit different in that we have experimental survey components often in Japanese. Now it's going too fast. Can I go back?

AUDIENCE:

Big green.

KIYOTERU

Big green? OK. Can I go back? Perfect. All right. So it has three components. One is a standard demographic question. Gender, age, education, so on, typical of any kind of public opinion surveys.

TSUTSUI:

Second is a stable set of questions about support for the current administration, trust in police, politicians, bureaucrats, and so on. Feelings for different countries and international entities and stable questions about whether you support revision of Constitutional Article 9 of the Japanese Constitution. Those are stable questions that we plan to ask. We plan to do it three times a year. And we plan to keep those questions.

The third one is particularly unique for our survey, which focuses for each wave on a different topic. And the first one we executed in November 2022. We focused on gender and sexuality. Composed perfectly with Mary's presentation. Second one, which is really fresh off the press, we just finished doing it in April 2023, on security and defense, which is perfectly aligned with Eric's presentation.

We are planning on doing business and technology thematically focused survey. So I will report to you, Eric, when it's done. So and it's quarter based sampling. And it's a huge number. 8,000, 7,000. Usually, our Japanese [INAUDIBLE] newspaper does a survey on Japan. It's 1,000, 2,000. So we are very confident about the reliability of our data.

And so the survey experiments are interesting, because they tell you what kind of framing might change public opinions. So it's not just about asking whether you support or oppose certain statements or policies. In Japan, Japanese public opinion surveys often go that route and ask the questions. And if you support this particular policy, why is that? And it's 10 different reasons, then let the respondents choose. That's one way to do it and it's fine.

But we are going the other way, framing the question in different ways. And I'll show you examples. And seeing what kind of framing might move public opinions one way or another. How questions are asked could matter in how respondents would respond to those questions. So that's the survey experiment component that I will lay out a little bit more in detail later.

And then again, the wave one survey was on gender and sexuality, wave two on security and defense. On gender and sexuality, we focused on same sex marriage issue. It was right after-- actually before Prime Minister Kishida's secretary made a derogatory remark about LGBTQ community. So the finding was quite informative in that sense.

And married couples with different surnames. When I tell people about this practice in Japan, a lot of people are surprised to hear that. But a lot of married couples in Japan, wives tend to acquire husband's last name. And by law, it doesn't have to be wives that acquire husbands' names, but in practice 95% of couples keep husbands' names. And that becomes a hurdle for women's advancement in society. So there's a lot of calls for change of that law.

And there was a minor controversy over that I think last summer about how the Japanese government's office, cabinet office, executes this survey. And the last one they did in 2017 ask this question, public opinion support for changing this law. And then there was an increasing support for legal change that enables women to keep their maiden names even after they got married. And in 2022 version, the support declined and then people are wondering why that is.

And as it turns out, the way they asked the question changed. So there's allegations, I can't confirm or deny that allegation, but there's allegation that the government pressured the cabinet office, the survey office to change the way they asked the question. So it was also perfect. It was actually before our survey, so we tried to test that argument here too. Anyway, so those are some of the questions that we focused on.

Also we want to ask about what kind of profiles of candidates for the Diet seats and corporate external board members the Japanese public might prefer. So that's the wave one survey experiment on gender and sexuality. Wave two on security and defense. On the heels of the new three security documents released in December, we wanted to ask what kind of security policy platforms the Japanese public might support. So we did an experiment to see what kind of policies the Japanese public might want to see.

And also we talk so much about Taiwan contingencies these days, and as also Eric alluded to. And we wanted to see under what conditions, in what scenarios is the Japanese public more likely to support Japan's military engagement in a Taiwan contingency. So those are the two key foci.

Starting with wave one vignette experiment. The vignette experiments are the experiments where you show certain vignettes. And sometimes it's a long story or an article. In our case, it's a question based vignette. So it's just inserting certain statements in a question to see how the public opinion might shift one way or another. And I'm going to skip over this quickly.

So we asked this question about same sex marriage. The current Japanese law does not recognize same sex marriage. And in the control case, there's nothing there and then just quickly ask what do you think about revising the law to recognize same sex marriage? And strongly support to strongly oppose. And then there's actually treatment statements that we inserted here.

And an example here, so the control question doesn't have anything there. And in the treatment question, we inserted this statement. From the perspective of human rights and gender equality, it is unfair for same sex couples to not be able to get married. What do you think about revising the law to recognize same sex marriage? Strongly support to strong oppose. So inserting that statement, does that shift public opinion? That was the experiment that we are doing.

And here are the seven state law. Actually, it was eight, but it didn't change the line. Eight treatments that we inserted. A treatment plus control with no statement inserted. And I'm just going to leave out the details and tell you that these are the two statements that actually moved public opinion.

One is that if same sex marriage is allowed, that could reduce heterosexuality and so on. It's actually going to cause harm to Japanese society. Incidentally, Prime Minister Kishida in talking about this issue talked about how allowing same sex marriage could actually change the fabric of Japanese society or something like that in a kind of negative way. He didn't say change in a positive way. So that actually seems to impact public opinion. So if you frame it that way, it actually reduces. The arrow there indicates that it reduces support for same sex marriage.

And the one that increases support is this. From the perspective of human rights and gender equality, it is unfair for same sex couples to not be able to get married. If you use the human rights framing, it actually increases the support for same sex marriage. Now, it's kind of interesting that all the other framing treatments didn't really have significant impact on public opinion, which indicates that the public opinion on this topic is relatively stable. It's not that easy to move the Japanese public on this issue.

The second vignette experiment is about married couples with different last names. Again, there has been a good deal of debate about whether a married couples should have the same surname. And in the control case, there's nothing there, and we asked, do you think the law should change the law for married couples to have different surnames? Strongly support to strongly oppose.

And in a treatment, we insert a sentence here. In this example, and we randomly insert all these different treatments. So each respondent receives different treatment. So in this treatment case example, we inserted this sentence. If married couples use different surnames, it would weaken family bond and cause harm to children, leading to loss for Japanese society. Again, so social fabric kind of statement. And indeed, that is the only treatment that has any impact on the Japanese public opinion. If you frame it that way, the public opinion support decreases for allowing women, allowing married couples to have different surnames.

Then there's-- a vignette experiments, now conjoint experiments. This is somewhat complicated. But it's far easier to show this. So we were asking respondents to choose from two candidates in each set. And each respondent received 10 sets like this.

And in this case, so there are two candidates for Diet member elections from the party that you support. Which one are you more likely to support? Candidate one, candidate two. We randomly vary age, gender, six different attributes, age, gender, marital status, children, education, and job background.

For candidate A, here is 32 year old woman who is married, has two children, college degree, and formerly a journalist. And candidate two is 42 year old man, married, one child, college education, used to be politician's secretary. So which one do you choose? And each respondent receives 10 sets like this. And then we can understand what kind of preference respondents might have in terms of different attributes.

And I'm not going to go into details, but for Diet candidate conjoint, it's very clear that the Japanese public supports women, prefers women as Diet member candidates. The line in the middle is the 0.5 line. Whatever is on this side means that candidates are more likely to be supported by the public if they have these attributes. On this side means that candidates are less likely.

So age, I didn't highlight age, but nobody wants 82 year old men to run for Diet. And there's a strong preference for younger generation, 32, 42, 52. And in terms of marital status, we inserted same sex couple here. Interestingly, there was some discrimination against same sex couples, candidate in a same sex relationship. Married people are preferred. But somebody in same sex couple relations are actually discriminated against in this regard.

And the same kind of conjoint for the board members. And women are preferred. Again, same sex couples discriminated against. Age distribution more or less the same.

So the takeaway from this is that there is a strong preference for women. And this is very similar at the-- level of support for women is similar to what we find in other OECD countries' public opinion surveys. And there's also a strong preference for younger candidates, and same sex couples actually face some substantial disadvantage when they are candidates for these elite positions, which is somewhat surprising considering very strong support for same sex marriage.

And I'm not going to go over the treatment effect heterogeneity effect, but we broke down whether those levels of support may or may not change if you look at younger generations, older generations, men, women. And everyone supports women across the board. And the discriminatory attitude towards same sex couples is less for younger generations. In fact, younger generations actually prefer candidates in same sex relations. Older people discriminate against same sex couples.

The wave two conjoint. I don't know if I have time for this, but I'll go very quickly. The security policy, it's the same kind of conjoint experiment with two different party platforms in terms of security policies across four different attributes. Goal, threat, new area, defense budget source, and so on.

And here the key finding is that a lot of people see China as the biggest threat. One kind of good piece of news here is there's a lot of-- if you read more left leaning Japanese media and newspapers, you hear a lot about how we're so worried about getting sucked into America's war. By aligning with the US so much we might actually end up fighting for the United States when Japan doesn't have a great stake. There's some discourse like that. There's not a lot of public support for that view.

Somewhat surprisingly, North Korea, even though they're shooting missiles left and right, they don't see that as the biggest threat. It's mostly China's expansion. Another interesting finding here is that much has been said about the 2% budget increase and how to fund it. And there's very, very strong opposition to tax increase to fund. Very strong. One of the most strongest effects that we found here, tax increase. It's actually OK to cut some other budgets like Social Security, but not tax increase. And national bond is a most popular option for funding the defense budget.

And although main goal, I should say, there's not a lot of support for expanding military deterrence capabilities. The Japanese public prefers the overall goal to be more like diplomacy and engagement with international society.

Taiwan conjoint is somewhat complicated and I will only talk about two results. One is that it matters what China might do with the Senkaku Islands, Diaoyu Islands. This is a scenario in which Taiwan contingency happens and different ways in which that might develop and in what scenario is the Japanese public more likely to support Japan's military engagement.

And if China goes after Senkaku as well at the same time, then Japanese public strongly supports military action by a self defense force. If China promises the Japanese government that we won't do anything to you, including Senkaku Islands, then the public is less likely to support. This is very important and interesting.

Also it matters what reaction other countries might have to a Taiwan contingency. If a lot of countries, international public opinion is against China, then the Japanese public is more likely to support Japan's military engagement in a Taiwan contingency. If a lot of the countries remain neutral, they are a little bit less eager to provide support for military engagement.

There are a whole bunch of other questions that are interesting, but I think I should stop here. So the takeaway from this particular survey is that Japan is still more or less a peace loving country but very worried about China and especially worried about Japanese islands, Senkaku, and their lives. So they don't want to have tax increase to fund defense budget increase. So I'm going to stop here. Thank you.

[APPLAUSE]

RICHARD Well, I apologize. I have to start with apologies for a late start and for technical difficulties with the equipment.
SAMUELS: We are running a bit late, but we can't not ask you to join the conversation. So with your indulgence, I'd like to do that. I think what I'd like to do is organize this around sets of questions. Let's say three questions crisply framed. Please not speeches, questions. And if you hold your hand up, do we have a microphone going around?

OK, please come up to the microphone. There's just the one here? Please go up to the microphones and ask your questions. We're going to-- we'll take three and I'll turn it to the panel and then we'll take three more and we'll turn it to the panel and we'll be done. So I apologize in advance if you don't have your opportunity. Larry, why don't you start?

AUDIENCE: Yes, for Eric, a very quick answer to two questions, please. The first one, you seem to imply that you're not confident Japan will fulfill its announced commitment money wise to defense. I may have misunderstood, but that's the impression I had. Second of all, you implied that they haven't thought through very well what they're going to spend the money on. Maybe one and two very quick answers, please.

RICHARD OK. We'll take one from here.
SAMUELS:

AUDIENCE: So I'm going to ask 1.2 questions. One is related to the labor force and women in Japan around entrepreneurship. And how has that changed and is that something that's growing? And then related to deep tech strategy and things like that, I wonder if that travels back to the strategy around education and STEM education. How does the Ministry of Education, for instance, get involved with that strategy?

RICHARD Thank you.
SAMUELS:

AUDIENCE: Two quick questions on macroeconomics. First I would argue that the change pre and post war was renaming, [INAUDIBLE] not reinvention. So talk to me about the cost of capital and whether the structure, industrial structure regarding cost of capital has changed in Japan over the last 20 years. And then future looking demographics. Over the next 20 years, can you compare the demographics of Japan, China, which is getting an aging population, and India, which will be birthing a middle class of 400 million, I believe. So many young people. Thank you.

RICHARD Great. Three very good-- well, three plus very good questions. And it's actually nicely spread across the panel. So
SAMUELS: why don't we start with-- well, Eric was asked the first question, and then we'll go to Mary, Ulrike, and Kiyo, you jump in with any observations that you feel are relevant. Eric?

ERIC Sure. So I think there were two subquestions here. The first is will Japan reach 2% spending on defense? The
HEGINBOTHAM: other is how will that spending be apportioned and will it be rational?

On the first question, I would say I'm not a political specialist, so I'm not really qualified to answer it. I will say the government has tied the defense increase very explicitly to a tax increase. And as we heard from Professor Tsutsui, that's not very popular. So I am a little bit skeptical that they will double spending.

Now, there's another point to be made here, which is just that Japan is also going to redefine defense spending. That's part of the way in which they will get to 2%. So no two countries on the face of this planet define defense spending exactly the same way. There are certain categories that are always held out. True of China, true of Japan, true of the US.

So Japan is adding new categories into what it calls defense spending. That's part of how they're going to get to 2%. So even if they get to 2%, they won't actually be doubling. But 60%, 80%. So I'm not sure they're going to get to an 80% plus up. But they might get to a 50% plus up, and that would still be enormous. Will it be rational? I mean, everything they're spending on are things that they need. The question is, will this be apportioned across all of their requirements according to the degree of need? And there I would say the answer is going to be quite mixed.

RICHARD SAMUELS: A short codicil to this, which is that they've already folded the Japan Coast Guard budget in its entirety, now labeling it defense spending. And all dual use R&D, government funded dual use R&D, is now defense spending. So they're on that path of redefining what it is to be a defense yen. And that's not exactly what the three statements had in mind, but thank you, Eric. Mary, I think the second question was yours.

MARY BRINTON: So let's see. Who posed the question about entrepreneurship and then the demographic question?

AUDIENCE: [INAUDIBLE]

MARY BRINTON: So I don't know if it's for you or for me.

ULRIKE SCHAEDE: You take what you want to take.

MARY BRINTON: I think female entrepreneurship has increased. But it's not so substantial that it moves the needle on gender inequality, I would say. STEM education. Ulrike, do you want to talk about that?

ULRIKE SCHAEDE: Yeah, I can do that. You want to take-- are you good?

MARY BRINTON: There are very, very few women in STEM in Japan, in education or in industry. So maybe Ulrike can talk about STEM education in general, but it's very, very gender segregated.

AUDIENCE: I'm just trying to get back to the deep tech roots.

ULRIKE SCHAEDE: Yeah, so first of all, on the entrepreneurship, I think that Japan is bad, but it's not worse than Silicon Valley. I mean, if you want to see a bad place, come to Silicon Valley. And entrepreneurship, I mean, it's totally male oriented, dominated.

STEM. I know UC San Diego it's a technology university like this one. I go to an engineering department class. I don't see a lot of women. So I'm not sure. I don't see a lot of women in the US either. So the good news-- so that's the bad news. The good news is that I think universities are waking up to this, as are entrepreneurship programs.

So there's a huge curriculum reform underway [INAUDIBLE] in particular on the urgency of the digital transformation and introducing things like being able to use a computer. I mean, not just Excel, but actually code and do things and data and so forth. So high school reform is underway. The top universities are making a lot of changes. Tokyo University has introduced a whole AI department and the Tokyo College, which is a new initiative to break through the old silos and create new departments.

So it's Japan. It's slow. But that doesn't mean stagnant. So there are reforms at the level of education. And I'm hopeful on the entrepreneurship as well. I think that's-- I was just in Japan on a city tech Tokyo event. And it was amazing. I mean, there was a lot of stuff going on there and a lot of Japanese entrepreneurs. So it was heartening to see that.

On the cost of capital, well, Japan has had 20 years of [INAUDIBLE]. 0 interest rate. And that was helpful, just like it was helpful here in the last three years, I guess. And so I think the cost of capital issue is not the issue. Japanese companies have a lot of cash, the good ones that I'm studying. So the cost of capital is no longer necessarily the challenge. The challenge is finding ways to do something with it, to reorganize the whole setup of how they think about efficient capital use.

And then the final question is the demographics. So the forecast is by 2050. So right now, as Mary said, 70% of Japanese are still younger than 65. So it's good. But by 2050, not so good. The workforce will fall from-- the Japanese workforce is currently 65 million people. It'll dip under 50 million by 2050. The other countries that have similar profiles are Korea, Germany, and Italy with China. And so there's a lot of European problems there and then China as well.

For Japan, I just republished a little monograph that this could be a lucky moment. Because Japan is, of course, the frontrunner in this, the trailblazer. And for Japan, this aging is happening just at the exact time as the digital transformation, which changes this notion that robots are evil. So the Americans have all of these science fiction and so forth about how evil robots are. Japan doesn't have that in the same way.

But there's a very pragmatic, ooh, we don't have labor. Oh, OK, so this could actually be good. So blockchain driven logistics is actually a solution to the problem that the CEOs of Japan's wholesalers are all older than 75 years or something. So I'm cutting short a complicated story. But actually the digital transformation could be sort of a solution for some of the demographic change. So we should stay tuned on that. Yes, it's bad, but yes, there may also be a new solution on the horizon.

RICHARD Kiyoko, did you want to add anything?

SAMUELS:

KIYOTERU I'll just quickly say that we didn't ask a lot of questions about business and technology, but we did have several and one specifically on Prime Minister Kishida's five year startup growth plan. And it did not have a lot of support. I'm not sure whether the public quite understands it that well. But it didn't have strong support.

Another item asked would you recommend younger people who are entering the job market to go to the sort of lifetime employment career track or the start up career. And it was indecisive. So it's at least not the strong support for lifetime employment anymore.

RICHARD SAMUELS: Thank you. That's very helpful for context. This will be the last question.

AUDIENCE: Yes. A lot of talk about digital transformation being a big deal in Japan. No one mentioned green transformation. What is your view of Japan as a leader in driving decarbonization?

ULRIKE SCHAEDE: I guess that's for me.

RICHARD SAMUELS: Go for it.

ULRIKE SCHAEDE: So the Fukushima disaster was a disaster in so many ways. I mean, the whole nuclear disaster, of course, was basically at the end of the Kyoto Protocol and so on and then we're all back to coal and this is all very bad. At the same time, it was a huge wake up call on the deep tech frontier.

And one of the areas where Japanese companies are very strong is actually clean tech materials, whether that's membranes or the sort of thing that helps power plants to be slightly greener. So Japan used to be sort of a front runner. And then with 2011, that wiped that out in a way because we're now burning coal. Germany then followed suit and did the same thing.

But on the research side, I think there's a new push and Japanese companies stand to play a role in this. So I would look there as Japan together with German and American companies to lead the pack in frontier technologies on what we can do that is not nuclear and not coal and not oil and maybe not wind and not sun either. And so there has to be other things. We have to rethink the whole template. And I think that's what's happening.

AUDIENCE: [INAUDIBLE]

RICHARD SAMUELS: Does anyone else want to add anything?

KIYOTERU TSUTSUI: So just to underscore Ulrike's point, growing up in Japan in the '80s and '90s, I also felt like Japan was a kind of advanced nation in terms of at least caring about the climate change. It wasn't called climate change, but the greening and everything.

We have this section where we asked 10 or 15 different items in terms of policy support and which one Japanese public might prioritize the most. Climate change is very low. Immigration is the least popular in terms of advancing and doing more for the Japanese government. But climate was surprisingly in the bottom four or five. So I was a little bit taken aback by that.

ERIC HEGINBOTHAM: I guess I would just add Japan's investing an enormous amount in hydrogen right now, which is great for long term. It does mean they're underinvesting in other technologies like battery powered cars and are actually actively lobbying against environmental regulations in the United States that encourage the adoption of battery power as a consequence. But in the longer term, if there's potential there, Japan will reap enormous rewards and that will be a game changer.

RICHARD SAMUELS: Mary? Your last word.

MARY BRINTON: I'd like to add just one footnote to what Ulrike said about the demographic issues. I think it's definitely the case that the Japanese government needs to operate on two fronts. Trying to raise the birthrate, that may or may not work no matter what they do, basically. But the society is aging.

And in this respect, as Ulrike said, Japan is the front runner the forerunner of what's going to happen in a lot of other countries. And so to the degree that the government and industry thinks about technologies, how to solve labor supply problems, maybe with robots and so forth, Japan could be very innovative and could potentially lead the way for other countries such as Italy, Singapore, China, South Korea, et cetera, et cetera. Because again, this is hitting Japan hard now and it's going to hit other countries as well. Birth rates are not suddenly going to go back up to 2.5 children in other countries either.

RICHARD SAMUELS: Thanks very much. Look, this has been a very rich tour d'horizon. You've heard a lot about a lot and very stimulating in every case. So I am very grateful to the panel. We had a metric that Eric suggested, which was one vote for reinvention, one vote against reinvention. You keep your own score. I'll keep mine to myself. But I think it is a mixed bag and we learned a ton. So thanks to the panel.

[APPLAUSE]

And thanks to the US Japan Foundation for joining us in sponsoring this event. Thank you, everyone, for coming. Bye bye.

[APPLAUSE]