Australia-China Relations Institute
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Transcript

China-Russia cooperation in advanced technologies - Report launch

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Moderator: Dr Marina Zhang, Associate Professor - Research, Australia-China Relations Institute, University of Technology Sydney

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Dr Corey Lee Bell:

Good evening members of the audience and special guests. Before we begin the proceedings, on behalf of all of those present, I would like to acknowledge that this webinar is hosted on the lands of the Gadigal people of the Eora Nation. I would also like to pay respects to the Elders past, present and emerging, acknowledging them as the traditional custodians of knowledge for this land. This session will now be recorded. We'll record audio, screen-share and our presenters. We will not be recording any video or audio input from the audience.

Welcome to all UTS students, staff and all friends of ACRI and UTS. I'm Dr Corey Lee Bell. I'm a Research Officer at the Australia-China Relations Institute at the University of Technology Sydney, or UTS:ACRI. UTS:ACRI is an independent, non-partisan research institute established in 2014 by the University of Technology Sydney. Chinese study centres exist in other Australian universities. However, UTS:ACRI is Australia's first and only research institute devoted to studying the relationship between these countries. UTS:ACRI seeks to inform Australia's engagement with China through research, analysis and dialogue grounded in scholarly rigour. If you would like to learn more about UTS:ACRI and the Australia-China relationship, details are available on our website at australiachinarelations.org.

Today we are happy to host this webinar and report launch titled, 'China-Russia cooperation in advanced technologies.' This discusses the findings of a report recently published by UTS:ACRI which addresses the current key areas as well as the potential future trajectory and broader geopolitical impact of Sino-Russian advanced technology cooperation.

The main presentation in this webinar is from the report's author, John Lee, who is the director of East West Futures Consulting, a researcher at the Leidden Asia Center, and who formerly worked in the Department of Defence and the Department of Foreign Affairs and Trade. The event today will be moderated by Dr Marina Zhang, a researcher at UTS:ACRI, and a well-respected scholar in emerging technologies and innovation in advanced manufacturing. For the audience, if you'd like to submit questions for the Q&A session, please do so via the Q&A button on the bottom bar. I'll now hand you over to Dr Zhang.

Dr Marina Zhang:

Thank you, Corey, for your introduction. Thank you, John, for joining us today to launch the report.

When I first read the report, I was a bit puzzled by the topic, especially in the context of Russia's invasion of Ukraine, which as you know has accelerated the further isolation of Russia from the global technological system. And this partnership between China and Russia has only made China's already very complex geopolitical situation even more complex, and that only accelerates the technology decoupling between China and the West. And this is because, well, I mean the Western democratic countries led by the US have developed this so-called 'grand deterrence strategy,' that is to deter their adversaries, mainly Russia, from acquiring advanced technologies. And China joined this camp.

I'm honestly a bit puzzled. I have over 20 years' experience in doing research in China's innovation, especially in technological innovation. So I just can't see the benefits for China [of continuing its cooperation with Russia]. After reading John's report, I somehow felt enlightened. So this is the report. Please refer to our website for the digital version. You cannot order a physical copy anyway.

So I guess what John can offer us today is perhaps to open this black box of this so mysterious collaboration between China and Russia in advanced technologies. So I think what John can do is to tell us what this partnership, this collaboration, is all about, and how they collaborate. And I guess most important is how this collaboration, these relationships, unfold, such as [in terms of] the benefits and the costs for each partner in this relationship.

So before further ado, I think I'll pass on to John. John, just to just remind you of the format, you have 10 minutes to give a brief introduction to the findings of your report and then you and I will engage in the discussion about the topics you've covered in the report, and that will be 25 minutes. Then after that, we will address the questions raised by the audience. I will direct you to the questions and you give them the answers.

Alright, I think that's all from me. So to you, welcome, John.

Mr John Lee:

Thank you, Marina, and good evening to everyone Down Under and wherever else you may be watching. I do apologise for the lighting. It's rather early over here in Europe and you don't get a lot of sun in Berlin under normal circumstances. So I hope that we can persist.

Regarding the opening proposition of yours, Marina, that's it's surprising that China would align itself or place so much emphasis on the technology partnership with Russia, the first thing I would point out is that I hope it comes across from the report that Russia is not China's only technology partner. Indeed, as I have commented on social media in connection with this report, current events have highlighted that, in fact, Russia is not even China's most important technological partner. But it is a critical strategic partner that falls into a class of its own in Beijing's eyes. And when it comes to certain categories of advanced technology, and we will get to that in the course of discussing the different technological stacks that are covered in the reports, Russia can provide China with resources that it is still hard to obtain elsewhere and which, at the margins in the so-called geotechnological contest with the United States, may help Beijing's ambitions.

So I will be as brief as I can in recapping what is a reasonably comprehensive report. In the introduction, of course, I do highlight that it is not comprehensive in the sense of covering every area of Russia-China technological cooperation. There are other fields, notably cooperation in development of nuclear energy or in the extraction of hydrocarbon resources, advanced undersea mining extraction techniques, and so on,

which are not addressed in the report because it chooses, as the executive summary outlines, to focus on what I have personally viewed as the most consequential technologies for the international balance of power. And that, of course, is defined in broad terms because we are not only looking at military technologies which are concentrated in the third, and to an extent, in the fourth of space-oriented sections of the report. But also, and this often is neglected I think or underdone in discussions, particularly about the China-Russia partnership on the constituent technologies of future economic and technological power.

So if we were to run quickly and we can get in the question and answer both with Marina and with the audience into more details on things like semiconductors which are currently in the news. But if we were to run just quickly through the four main technology categories which are covered in the report, firstly, I have grouped together a number of technologies, telecommunications in the broad sense, artificial intelligence and software development, and cyberspace governance and information security, which we might broadly describe as ICT – information and communications technology. And this is obviously an area which has been the focus of intense politics and competition certainly over the last three or four years between the United States and its like-minded partners on the one side and China on the other. Everyone I'm sure is familiar with the discussions regarding the presence of Chinese telco provider or equipment provider Huawei in the expansion of 5G telecom networks and discussions about Chinese alleged cyber espionage, about China's role in defining norms of internet governance, and the general governance of cyberspace as a domain.

So in starting off the report with this section, I've sought to highlight that really, despite this often, again, not being the first thing that you read about, in much of the discussion about China and Russia as strategic partners and the geopolitical and international relations contest, so-called, with the US-aligned block, these technologies are really key because they are the ones on which the contemporary and the future economy will be built, and frankly the ones in which China is in many ways most competitive with the world's advanced economies.

Perhaps before I move on, it's worth taking a step back here and again highlighting one of the reports main conclusions, which is that Russia is on the whole a declining technological power. Certainly one can make the argument that throughout the later decades certainly of the Cold War, the Soviet Union, the antecedent state to the modern Russian Federation, was already not really a peer competitor of the United States, at least as far as advanced technologies were concerned. It was falling behind for a long time, and that has only accelerated in the decades since the fall of the Berlin Wall, as the United States and its advanced economy allies have really dominated the commanding heights of advanced – particularly information and digital technologies. And this is an area in which Russia has really fallen behind. However, as we will get to, many of the legacy technologies, particularly in the defence and space sectors that Russia has inherited from the Soviet era, certainly areas in which it can still be a useful partner to China.

The second section, or rather, the one that's numbered third after the introduction of the report, looks at machine tools, the fourth industrial revolution type technologies, and micro-electronics. And as I've mentioned, semiconductors have certainly been in the news recently regarding the US-China technological contest and the measures which the US government is now taking to constrain China's technological development. I personally would argue that this amount, certainly if we look at what was done last month in terms of export controls targeting China's semiconductor sector, to a technological containment strategy, and effectively the start of a technological cold war, at least from Washington's side with respect to China's future technological development. So perhaps we can deal with that more in the Q&A. Machine tools is a sector which again is not really discussed much of at all in a lot of the security and strategic studies oriented literature and media commentary on Russia and China, and yet it is such a critical choke-point technology because machine tools are the equipment with which you conduct basically all advanced manufacturing. And again, an area in which Russia has seen its Soviet era industry completely hollowed out and has become effectively dependent on machine tool providers which are exclusively located in the US aligned advanced economy block, primarily Germany and Japan.

And this is an example of many sectors where China, despite having come from a very primitive industrial base two generations ago, has been, unlike Russia, systematically trying to catch up, but has not yet reached the point where it can substitute, at least at the same level of technology and performance, for western suppliers of technology to Russia, China and the rest of the world. Western to include Japan, again, treating the US-aligned advanced economies as a block.

The same applies for fourth industrial revolution technologies. And my social media commentary and the report have highlighted the fact that, as has been highlighted by the recent visit of the German chancellor, Olaf Scholz, to Beijing, really in many ways, Germany, and to some extent Japan and other US allied advanced economies, are China's most important technological partners in these areas for the simple reason that they are the technological leaders worldwide. If you talk about them for IR, smart manufacturing, industrial automation, really it is German firms more than any others which are the world leaders. And this is precisely the area, or one of those fields, in which Russia has fallen behind and become effectively completely dependent on western supply technologies, which is one reason why the international sanctions regime against Russia has been so effective – [the sanctions regime] that has been instituted since the invasion of Ukraine proper commenced earlier this year. And this is a factor that inevitably overshadows Russia-China cooperation, because China also, despite it's – in contrast to Russia – sustained and increasingly successful efforts to upgrade in these technologies, it too remains extremely dependent in some areas and benefiting to a large degree from cooperation with particularly firms in these US allied countries. As partnerships with United States and its companies become increasingly problematic, the importance of partnerships with recent institutions in countries like Germany, Europe more broadly, Japan, South Korea becomes more important to the Chinese.

And that's one reason why you've seen so much attention given to Chancellor Scholz's recent visit to China because people are beginning to recognise that, in fact, these partnerships are critical to China's future potential to progress in advanced technologies. And again, I'm very happy to deal with that in a more extended way in the Q&A.

To move on quickly, the next section of the report looks at defence-oriented technologies. These are, of course, the main focus of most reports and commentary on China-Russia strategic cooperation. And I've looked at, again, a sampling of what I would consider the most critical high technology partnerships between the two countries; aviation, air and missile defense, hypersonic vehicles, unmanned platforms, also called UAVs, and anti-satellite capabilities.

I think that all of these as subject areas will be familiar to those who follow defence affairs and the China-Russia partnership. And frankly, although this is the area that many commentators find of most interest, it is also the one that is probably most opaque, as is the case often with defence issues, particularly for China and Russia, and it is an extremely opaque subject where it is possible to gain some insight from open source reporting and from longitudinal surveys of China-Russia cooperation and its evolution over time. But there is a lot that remains unknown. And of course, the implications of the Ukraine war still remain to be worked out, certainly in the context of the China-Russia relationship. We have to remember there that the war is ongoing and we can perhaps talk a little more about where that may be heading and what it means for the China-Russia partnership in the Q&A.

But the final section of the report, which I'll deal with briefly now, is the uses of outer space. And again, this is an area which receives much attention in discussions in the media and in academic circles, policy circles, of China-Russia cooperation. This is of course one sector in which state directed strategic technology development has been more successful than in many other areas of technology where the private sector's civilian industry over the last quarter century has really taken the lead. So as opposed to telecoms and artificial intelligence, or even fourth industrial revolution technologies, the classic space, pro-national space programs, launch capacity, satellite based navigation, and in future potentially a base on the moon and the

further exploration of the farther galaxy and of the farther reaches of outer space, is an area in which state-directed projects have still very much led the way in most countries around the world.

The major exception or new trend there would be, of course, the rapidly emerging role of the private sector in satellite launch. And that of course is one of the sections within this final chapter of the report. And it's worth pointing out here that again, the model provided by American firms like SpaceX and Blue Origin, and the implications of Chinese national power of the rapidly increasing US launch capacity as a result of the involvement of the private sector in the space industry, historically, very much the domain of NASA, and of the US government even in the Western context, is a trend that China has been watching and copying in terms of its own space policy.

And if we bring it back to Russia, we see once more that really what Moscow can offer here is access to legacy knowledge and technology rather than to a dynamic and forward looking technological and research base. Although the Russian R&D [research and development] sector in many areas is still highly capable and arguably even at the cutting edge in terms of certain basic and applied research, really as time passes, what Russia can offer to China in terms of technological partnership is decreasing. It is basically drawing down a legacy stock of knowledge from the Soviet era, which the Chinese can still benefit from, but it is not adding to that stock even proportionately with its Chinese partner, never mind in terms of what is happening in the rest of the world and primarily in the US-aligned advanced economies.

So perhaps to then bring it back to the question of the Russia strategic partnership with China as a whole in advanced technologies, this is not a sunset partnership in the sense that Russia and China cooperation is a substantive dead end. And certainly at the political level, it is a partnership which Beijing, to one prominent Australian commentator on the subject, will not abandon for anything that Western governments could offer simply because China does not have another option besides Russia for serious strategic counterweight to the United States and its allies.

But that said, the importance of China's relations with many of those US-aligned countries, which I've alluded to earlier in my remarks, means that China is extremely careful about how far it is prepared to pursue its relations with Russia, particularly in those domains of technology and economic cooperation which are most exposed to international relationships, and to, of course, the power of the US government to exert its market power, the market power of the US economy and of US firms, and the extraterritorial reach of US law. And once again here, the recent news about semiconductors simply illustrates, I think, how vulnerable China itself is to the exercise of US power when it comes to access to the networks and international supply chains which are critical to China's own progress in advanced technologies. And China's willingness to pursue its relationship with Russia will be heavily circumscribed by this basic equation.

If we deal briefly in conclusion with the implications for Australia, as I've said in the report, this is ultimately a subject – China-Russia's strategic partnership and, in particular, advanced technology cooperation – over which Australian policy makers frankly have very limited influence. But it is a subject that bears monitoring because the single greatest factor shaping Australia's strategic environment is China's progress in advanced technologies. If I can one more time use the example of the export controls instituted by Washington against China's semiconductor industry last month, as framed by senior Biden administration officials like National Security Advisor Jack Sullivan and others. This is effectively the start of a technological containment strategy against China. And it reflects a message which has been coming strongly from Washington for some time that the technological-economic contest with China and the rise of Chinese technological power on the world stage is the biggest factor changing the international strategic environment which applies to Australia as much as any other country.

But of course Australia's unique circumstances, being located in this region, being a country whose future lies very much with the countries of Southeast Asia, of East Asia, which are themselves increasingly closely

integrated with China and so exposed to US-China geotechnological competition. This is a first order issue for Australian policy makers in terms of how China's rising technological power shapes our international environment. And at the edges, the partnership with Russia, problematic as it is for China, may have a significant impact in particular technologies. But I think that that is a reasonable introduction to the report. I would now pass back to Marina to focus on those aspects that may be of most interest to her before we go to general Q&A.

Dr Marina Zhang:

Thank you, John, for your introduction. You covered four technological areas of the collaboration between China and Russia and you outlined each partner's strengths and weaknesses in all those areas. And well, what my observation, or the conclusion I can draw from your introduction is that this partnership is, for China, is very much for strategic purposes. As you said, while Russia perhaps is the only major partner that China can form such a partnership. But to be honest, my observation or my understanding of China's innovation is that in the past two decades, as you perhaps know, that China has actually made a very strategic shift to pursue innovation driven growth rather than just focusing on investment in infrastructures and export.

So Russia, on the other hand, actually has been driven by exporting its nature resources, agricultural products, and it's dedicated its limited resources to military technologies. As you mentioned, that is the area where Russia still holds advance technologies and its legacies from the Soviet Union. But the question is, that area of partnership is very opaque. We really don't know what's going on. So I just want you to tell us, so tell us, why is China engaged in such a partnership? What are the motives? Or what are the benefits China can get apart from forming these strategic alliances? And what are the potential costs for China in terms of geopolitical or geotechnology competition?

Mr John Lee:

So I guess we can treat that in two parts. Firstly, what does China get from it? Well, actually, let's take one step back further. The report does touch on the broader question of why China sees Russia as an important strategic partner in the first place. And as I say at the very outset of the report, really this is a question about who is the primary enemy in the view of both Beijing and Moscow? Because the United States is seen by both countries as their primary strategic threat, and I don't think it's an exaggeration to say that the Chinese Communist Party and the Putin regime in Moscow do see the United States and always have seen it as not merely a competitor but as an existential threat at a certain level. They need each other in order to counterbalance. Because China, of course, as you pointed out, Marina, until very recently, has been very far behind in most areas of technology.

I would argue, in fact – and to slightly digress – that China is still very far from being a technological power on the level of the United States, and in many areas is still significantly behind even what we might consider second-tier powers in the international system like Germany. If you talk about, really, the fundamental constituents of technological and innovative power, and certainly the ability to diffuse and use technology effectively, though that's another issue which we might need to address in a separate question. But in a context where both countries see themselves as the underdog against the US, and in particular against the US aligned block, because we're not just talking about the United States. As I said, if you look at which economies in the world dominate the advanced technologies which are described in this report and a bunch of others besides, it is pretty much all the US allies, right? Germany, Japan, South Korea. These are the countries which dominate fourth industrial revolution technologies, semiconductors, telecommunications and so on. All of them are US security allies. So where does China turn? Despite the fact that, as again, we can get into perhaps another question. China still has important partnerships with these US allied economies. When it comes to the crunch, which country is going to be in China's corner in the strategic contest with the United States? It's not to say that China and Russia are part of a coordinated strategy against the United States. I think that's important to qualify that what you see is a partnership that promotes each country's separate

strategies, and in particular, they're separate strategies vis-à-vis Washington. So they don't necessarily need to act as part of a team. Merely by being partners who help each other out when it's convenient, if one has to oversimplify, they are redressing the strategic balance of power to some extent with the United States. And I see there's already a question in the Q&A about whether China can go it alone vis-à-vis the US and its allied block. We can again come to that later. But really, although Russia cannot compensate for the, I would say, the preponderance of economic technological power on the US side of the fence, it's the best that China can do frankly. So that is the basic strategic equation for the partnership.

Now, if we come to the question of what are the risks that China runs from this partnership, I've already mentioned sanctions quite a few times in my opening remarks. Chinese firms were extremely quick, as you know, to drop business with China in many cases, not just the private firms, but also the state run enterprises in the energy sector and other areas. They suspended business very quickly with Russian entities after the initiation of the coordinated sanctions regime on Russia back in February and over the following months. Because they cannot afford, the big Chinese SOEs [state-owned enterprises] included, to lose access to the wider international economy which they run the risk of doing if they are caught up in the sanctions against Russia.

Again, China is already under significant pressure, not just particular Chinese companies now, but if you look at the October semiconductor controls brought in by Washington, export controls targeting China's semiconductor sector. The entire Chinese economy now in some areas is being targeted for essentially being cut off or frozen from access to those international production networks, R&D generation networks, which are so important to China's future technological prospects. Therefore, there is a hard limit on how much risk China, in particular individual Chinese firms and entities, are willing to run for the sake of continued partnership with Russia.

The choices of the Chinese state, of course, are another matter. And again, as I say in the introduction to the report, the Chinese government made clear pretty early on this year that strategic technology cooperation with Russia would continue across many sectors. But of course, the extent to which Chinese actors are willing to actually do that at the grassroots level is going to be heavily circumscribed by the sanctions risk. Now of course, the sustainability of the international sanctions regime against Russia and the willingness to extend sanctions to China on the part of US allied countries are significant unknowns here. And again, perhaps we can get into that in further detail, but I don't want to monopolise discussion further at this point, so I'll throw it back to you and also keeping an eye of course on the questions in the Q&A box.

Dr Marina Zhang:

Sure, we still have some time to discuss. Well, let me just address some things you mentioned. Well, I think what you said is, well, that's very much Chinese philosophy. So the enemy's enemy is my friend. So to that extent, well, maybe to form a partnership with Russia isn't a bad idea. But as you said, the technological function against China in the area of semiconductors, well, let's just have a look at cause and effect. That too is perhaps totally independent, but maybe China's partnership, unlimited partnership with Russia in advanced technologies, maybe that accelerates the US sanction against China in this semiconductor industry.

And another thing you mentioned, so, that comes to the point of how we define innovation. Innovation is not just all about technological breakthroughs. China's innovation power is in fact in its manufacturing capabilities. That has been the engine for China's growth and for the base of China being the world factory. And the reality is, well now Germany and even France and many industrial countries, including the US, they're still investing in China. Why? Because China is the only country that can translate advanced technological design into commercial products at scale and at cost, at competitive cost. So that you cannot deny. So I don't think China is that isolated in the geotechnological landscape compared to Russia. So the partnership with Russia may be accelerated via the stance in the US that China along with Russia is our adversaries and we need to impose this grand deterrence strategy.

Mr John Lee:

Yeah, I think it's pretty obvious that the unwillingness of Beijing to expressly condemn and break from Moscow over the invasion of Ukraine has really hurt its stock in, let's say, US allied countries, certainly in Europe. In the case of Washington, I would argue that the US has already been set on, as far as the US political and bureaucratic class is concerned at least, on a course of unalloyed conflict/strategic competition with China for some time. And that really, the policy of Beijing towards [Russia] following the invasion has just been the icing of the cake in that sense.

It hasn't moved the dial in Washington because it was already there, set to strategic competition. And what you've seen in terms of, as I mentioned, the remarks by Jack Sullivan, by the US trade groups, of Katherine Tai and other US officials regarding, just to use a specific example, the semiconductor export controls of last month, makes it very clear that this is effectively a new Cold War, and that China is seen as the primary national security threat to the US, and that maintaining a technological gap between the US and China is the response that's seen as needed in Washington.

So in that sense, China's failure to undercut Russia over its invasion of Ukraine is neither here nor there when it comes to fundamentals. That's not necessarily true for, again, European capitals, where I think the perceptions against China, which of course were already worsening for many reasons, have definitely been badly affected by at least the perception that China has not pulled its weight in terms of trying to reign Russia in over Ukraine. Whether Beijing can actually do that, how much influence China actually has over Putin's decisions, whether before or after the invasion started, is another matter. I would argue actually it doesn't have that much. But coming back to the issue of what Russia gains, sorry, what China gains from the partnership, I think that one point I hope comes across from the report is that really, in many ways, Russia benefits more than China from, certainly, the technological aspects and the economic aspects of this partnership at this point. But it sits within a broader context in which the Chinese leaders, and of course, there's a certain political and strategic culture in China, which these decisions are made within. So you might argue that, from a Western perspective, using the sort of calculations and frameworks that we generally are given in the media and in the policy making space in Western capitals, it doesn't make sense. But in the Chinese context it does make strategic sense, and technological partnership in that context is something that is important to Russia and in certain areas still benefits China.

So I mean if we take specific examples from the report, in the aviation sector, for example, I give the example of this as an industry where Russian legacy knowledge and expertise is still useful to China. We have to remember that in terms of knowledge generation and innovation, not everything can be quantified in figures and stimulated in terms of recent funding programs. A lot of knowledge is corporate and intangible knowledge, which is built up over time. And so if you talk about things like advanced jet engines, et cetera, and certainly process knowledge in very complex industries like high end aviation, the accumulated knowledge over time that the Russian Federation has accumulated because of the Soviet heritage, is still an advantage that it can provide to China, which has a younger and more derivative aviation sector.

Now that balance is changing in many areas, which is why I emphasize that this is really a, if you like, a depreciating asset for Russia that it can offer to China as a basis for their cooperation, because China's innovation and R&D system, I would argue, is much more dynamic, much more integrated with the rest of the world, with technology and R&D leaders in other countries. And therefore, over time, Russia will have less and less to offer and China have less and less to gain from partnership. But for the time being, in select technology sectors, Russia can still offer China substantively useful things. And as you pointed out, Marina, if we talk about defence technologies specifically, Russia, this is perhaps the only area where Russia really has been, if not staying at the technological front here globally, at least trying to keep up and focusing on things like robotics, artificial intelligence primarily in a defence context.

And there of course, again, the fact that China faces such a coalition ranged against it, if you like, in terms of the dominant technological power of the United States, of its R&D and innovative capacity and all of the US allies lined up behind that. That's oversimplifying. But again, if you think of it simply in terms of scales, what can China put on its side of the scale? Really, if you talk about certainly defence technologies, countries like Germany and Japan firstly are not focusing on that and secondly are not going to cooperate with China against the United States. Only Russia is going to do that.

So there, I think, you have in a nutshell the value proposition in advanced technology cooperation to China. I mean, I do touch on other things in the telecoms area, for example, Huawei's attempt to exploit the Russian market as it faces increasing pressure in its access to Western markets over the previous decade. But of course, that's always been very limited. Russia is an economy, as we hear often these days, roughly the size of Australia or a little larger. It doesn't represent the same sort of market and opportunity for Chinese companies like Huawei as the rest of the world, even the developing world, never mind the rich large economies that characterise the US security alliance network. But again, perhaps here I'll wrap up on that point and we can pursue any of those particular points further.

Dr Marina Zhang:

Thank you. I totally agree with you. I agree with you that Russia still has very strong base in basic research, in basic science, especially mathematics and physics, including its own accumulation in the past decades and their heritage from the Soviet Union period. But I have to remind you that, well, China actually has had a very bad history with Russia in terms of collaboration. I mean the 1950s, and you perhaps recall that China actually adopted Soviet-style industrialisation, including many of its industrial policies, and in fact China developed its heavy industry based on the Soviet model.

So I'm surprised that the world still rolls and China moved on. But I guess let's just use the title in your report to wrap up what you try to tell us. Well, this so-called unlimited partnership actually is limited.

So let's open it up to the audience for questions. I'm sure they will have more interesting questions.

So the first question is from Jake Lynch, 'Will China be able to meet its goal without technological corporation of these western countries? Will it ultimately have to seek agreement or can it really seek these Russians help to go it alone?' John, what's your view on this question?

Mr John Lee:

Yeah, it really depends on what you mean by the goals. It's certainly possible that China could be autarkic in the way it wasn't completely autarkic during the Mao era, but I guess that provides a model of what that would look like: China as a giant North Korea basically, economically and technologically self-sufficient. But in that context, of course, it would not be able to compete with the United States and its allies on the international stage. For China to be competitive in terms of matching the level of technology and performance from the US and its allied countries, it must be part of that international system. And I think that Chinese leaders have recognised that for a long time. If you look at my other writing on the general subject of Chinese technology, you notice that I emphasise a lot how Xi Jinping emphasises – and you see repeated in Chinese policy statements – despite all of the talk about self-reliance and the need to make China into a cyber superpower, et cetera, the need for China to remain plugged into the world economy and the international R&D economy. Because unless it can do that, I don't think that China can compete with the United States and its allies, at least as far as the level of technology and the level of dominance in industries on an international scale, if we're talking about the world as a whole, is concerned.

Now, to focus on the question as asked, will it ultimately have to seek reconciliation with the US-aligned bloc or can it go it alone with Russia's help? I mean on the second bit, my first answer doesn't change.

Russia cannot substitute for the advanced economies, as I've emphasised over the course of the webinar and the report. Just once more to drive it home, there's a reason why China's main partnerships in IR, smart manufacturing and so on are with German companies or Japanese companies, not with Russian ones, right?

So if anything, Russia there, as I said, is the one that benefits and is seeking to expand the partnership with China because it depends on China, not the other way around, in order to simply stay in this game at all. If you look at machine tools for example, the Russians, as I mentioned in the report, have been trying to diversify the source of supply away from Germany and Japan over the past decade and a half once they recognised that the Soviet machine tool sector had been completely hollowed out and that they were importing all of the stuff that they used to make other stuff basically.

But China cannot yet produce machine tools at the same level of technological sophistication, at least at scale, as the German and Japanese companies. And as it becomes more able to do so, it's going to use those machines for itself for its own economy. It won't have spare capacity for Russia. So there again is an example of where the partnership really does not deliver much for China in that particular context, and certainly cannot help China to go it alone in the sense of being cut off from the other advanced economies. Now, the final thing I'll say on this point is that, again, to reiterate a point I've been making, China is not going it alone in the sense of being cut off from economies like Germany and Japan.

Again, if you look at the reporting around Olaf Scholz's visit to China recently and at what German companies are doing, I mean, they are doubling down in China rather than trying to get out, at least as far as the major automakers, chemical companies, electronics companies are concerned. The large German technology leaders are all doubling down on China rather than following Washington's lead, if you like, or admonishments in reducing their exposure to China in terms of market exposure, technology partnerships and so on.

So it's far from clear, I think, that the technology leaders outside the United States, even if they're headquartered in normally US-allied countries, are going to cut China off, unless they are really put in a place where they have no choice. And this is where the hard decoupling, the US export controls such as those put on semiconductors last month, are really the key. Because one of the things that US officials have emphasised regarding this new package of export controls is that they were undertaken without the prior agreement, at least as far as commitment to follow suit with their own measures on the part of ally governments was concerned. And that the US basically expects, having gone it alone, that its allies will follow and will take effectively hard decoupling measures against China. And the question becomes, if they don't, then what happens? This I think is really the key geotechnology question, the geopolitics of technology, if you like, that will work itself out over the coming years. And that provides the context in which China will, if you like, evaluates its partnership with Russia and what it can gain from it and the cost-benefit analysis in terms of the risks of being linked with Russia in the technology space.

Dr Marina Zhang:

Thank you, John. Let's move on to the next question from Victoria: 'Outside of the technological partnership, what about the BRICS countries as countervailing geopolitical power to the USA-aligned countries? Can they emerge as growing technological power, particularly Indian?' What's your view on this question?

Mr John Lee:

So I think India really falls into a category by itself here. I mean, I know it's fashionable to talk about the BRICS, or it was until the last couple of years, until it became apparent just how bad the relations with China had gotten from an Indian viewpoint. No, I don't think in short that BRICS is going to provide an alternative, or if you like, a technological power block. I think we need to slice up international relations. So it's not to say that the BRICS can't be useful from Beijing's viewpoint in certain context. They wouldn't be investing in the grouping as a concept otherwise. But if we're talking about, in very crude terms, technological and economic power,

then I've already highlighted, really, this is very much still dominated by the US and the US allied advanced economies. That specifically means a number of the EU economies. So it's not necessarily every European country, though obviously because the EU operates as a block in many contexts, you do need to talk about it in that sense.

But if we look at the key economies for the world in terms of where the technology leaders, like the specific companies that control the intellectual property, that dominate supply chains, that wield great influence over the provision and the deployment of technology in the world, where they're headquartered, it is United States, Japan, South Korea, Germany, the Netherlands, to some extent France and Switzerland. And in certain niches, let's say Australia, Canada and a handful of other countries. That's it really. And of course China is the challenger. That is really the entire landscape of advanced technology, at least the categories that I have looked at in this report. Countries like India and Brazil are still very much technology takers. They rely on getting their technology from somewhere else. And certainly in India's case, they're not going to get it from China.

So that means they have to get it from either Russia, which in the case of defence technology at least is a big reason why India has not broken with Russia over the Ukraine War, or they need to get it from the US and its allies. So no, they don't provide a counterweight in that sense. Again, it's not to say that the BRICS cannot provide some kind of counterweight in certain contexts to the US and different coalitions of the willing, but not in this context, I would say. If we maybe conclude briefly with India, there's been a lot of talk about India as a potential, I suppose, new China, in terms of, particularly, supply chain diversification. So can the United States and other western countries get their electronics manufacturing done there so they don't have to run the risks associated with having so much of that located in China? This is a big question. I guess I'm happy to put my cards on the table and say I'm highly skeptical that this will come about, at least in the near future. I don't think that India can offer the same value proposition, frankly, as China does in many areas. You see that in, basically, the behavior of the big Western multi-national companies. There's been a lot of talk, for example, about Apple moving a lot of iPhone production to India. To my understanding, those supply chains are still, firstly, most of the manufacturing still happens in China, even if we're talking about Apple as an individual company. And secondly, what they move to India, Vietnam and other places, still depends on supply chains that go through China. So a lot of the components still come from China, the supply networks have developed in China over the last few decades. That level of integration is going to be very difficult to unwind. And again, I've mentioned for example the big German companies. I don't see Volkswagen, for example, generating 30 percent of its revenues in India, which it does in China now in any foreseeable timeframe. I certainly don't see it entering into, well, it's possible that you could see Volkswagen and other German automakers doing the sort of things that they're doing in China in terms of entering into development partnerships with Chinese companies, setting up R&D centers in China, developing China increasingly as a R&D hub, not just for the China market, but for export to third country markets. You can visualise them, to some extent, doing that for India, but not to the same scale.

Dr Marina Zhang:

Thank you. So next from Michael, it's not really a question, is a comment. So 'to ally with an enemy of the European bloc seems to be very risky for China. They're walking a very delicate line, it seems to me.' So I think I agree with that statement. Your view on it?

Mr John Lee:

Well, I already mentioned that –

Dr Marina Zhang:

Some of the invisible benefits as suggested in your report.

Mr John Lee:

Yes, well, to focus on the question as asked, of course it's risky. As I said, definitely the perception, again, whether it's fair or not, that China has the power to reign Russia in over Ukraine and has not done that has definitely been very damaging to Beijing's stocks in European capitals. But again, let's look at what's actually happening on the ground. Even if we just go back to the semiconductor example, I mean, some of you might have seen the reporting from *Bloomberg* just yesterday about, or the day before, about the reluctance of US allies, in particular Japan and the Netherlands, where the relevant companies are headquartered, to get on board with the new controls, at least as applied to their companies regarding China's semiconductor sector. It is far from a given that just because the government in Tokyo or in the Netherlands or in Berlin or in Brussels, we're talking about the EU institutions, have beefs with China in various areas, that they are going to line up with Washington on everything, particularly when it comes to technology and economic issues. I think that is very much still an open game. Again, this is something that I think simply doesn't come across enough in a lot of commentary, particularly in the English-speaking media on this subject, which kind of portrays a united bloc or at least a common frame of mind, more attitude towards China: Everyone has woken up to the China threat and is now, if you like, pulling together, at least as far as the advanced economies, the US security allies, are concerned. That is really not true, in my opinion, at least as it matters on the ground in many specific examples like the one that I just gave. So I would argue that, yes, it is risky for China to continue being seen as in Russia's camp, but it's sort of been priced in to some extent by many governments, certainly once you get past the US allies.

And if you look at countries like, we talk about big developing economies, India, Brazil, Indonesia, et cetera, as we've just seen again with the G20, where Russia was invited, and Putin didn't turn up. These countries are not going to, if you like, make this important call on China policy because of Beijing's relationship with Moscow. And if we bring it briefly back to Australia, one thing that I conclude the report with is that really this is not a decisive factor in Australia-China relations either. I mean, Beijing is not going to change its attitude towards Australia because of what Canberra says regarding Ukraine, quite frankly.

Those key settings are decided in a larger context, if you like. So I wouldn't overstate the degree to which, if China were to go further and was actually sending arms to Russia to prosecute its war against Ukraine, and providing more direct forms of political and substantive support, that'd be a different matter. But where China currently is in terms of sitting on the fence, if you like, but leaning to the Russian side as it's always done, I don't think that that is as big a risk for China's equities with other countries as it might at first appear.

Dr Marina Zhang:

Unfortunately, we ran out of time, but I think I'll give you another minute to just answer one more question. So from Zach, 'How influential has the tech relationship with Russia been in steering China's support for Russia during the war in Ukraine? Is this a key plank of the relationship or less a factor in your view?'

Mr John Lee:

I think that, again, to kind of sum up –

Dr Marina Zhang:

Got one minute.

Mr John Lee:

Yes, the Russia China relationship is – it is solid for long term strategic reasons. And technology is a part of that. So the Ukraine war is almost incidental, I would argue. As I said, the Chinese government made clear

pretty early on it wasn't stopping its, at least, state led S&T [science and technology] cooperation with Russia over this issue. I mean, it has to calibrate because of the greater risk profile as a result of the international sanctions regime against China and against Russia, and to some extent the political blow back of failing to more explicitly condemn and break from Russia. But I don't think that for any of the technology stacks that I've described in the report, Russia – China's going to stop cooperation with Russia as a result of the Ukraine war.

It may make some reevaluation based on how badly Russia has done. And on Russia's obvious failures, I would argue, to effectively use many of these new technologies, including the ones that Russia was supposedly working on close to the technological frontier, at least in any effective way, in Ukraine. But I don't think that it's going to fundamentally change the calculus in Beijing about whether it's worthwhile continuing this partnership.

Dr Marina Zhang:

Thank you. So the last question, is China closing the technological gap with America and its allies? I think this question John has answered or has addressed in quite some detail in previous questions. So let's just skip this one and let's wrap up the webinar for today. So John, over to you. So you have maybe two minutes just to wrap up what you want to say to the audience after doing this fantastic report.

Mr John Lee:

Thanks very much, Marina, and thanks to everyone for listening.

I suppose if I had to leave you with one concluding idea to go beyond the specific China-Russia context, and this does go to the final question from John T. When we talk about China closing the technology gap with the US and its allies, we often imagine China, and I think this is often the case on the Chinese side as well. This is only visualised in terms of China mirroring the United States in terms of replicating the sort of dominance that the US and its companies exercise in the global economy and the global technology landscape. I don't think this has to be the case even to address China's own policy goals. So if you look at, again, some of my other work, take a look for example at the chapter that I co-authored in the report by my previous employer, the Mercator Institute for China Studies, on the CCP at 100, and the centennial goals for China in terms of its development of its economy and technological capability. This doesn't necessarily imply becoming coequal with United States. It simply means acquiring the means to meet the goals and the specific objectives that China's leaders, the Chinese Communist Party, decides are necessary for the country. That can in many contexts be achieved without necessarily being a technology power that's dominant in the sense that United States and its firms are dominant.

And if we come back to China's relationship with Russia, again, this is where competition at the edges matters. Because if we, let's say talk about, to use a specific example, outer space, this is one area where China-Russia cooperate just appears to be extremely close. I mean, in the report we discuss or I discuss the plans for a joint lunar base, for example, which may provide a foundation for further exploration of the moon, and of the further solar system and the galaxy, going forwards. Even if China and Russia are one step behind the United States and its allies in that sense, they are still in the race if they can exploit these new technologies and the sources of national power that come from them. And so we should not fall into the trap of thinking that just because it looks very difficult for China to become an equivalent to the United States and the world's leading technology providers, that China cannot significantly change the international balance of power and meet the goals defined for itself by the leaders in Beijing through clever, if you like, industry policy and international partnerships. And I think the relationship with Russia needs to be seen in that context.

Dr Marina Zhang:

Thank you, John. So we are finishing today's webinar, and thank you for participating in today's very informative report launch by John. Let me just pass on to Corey. Thank you.

Dr Corey Lee Bell:

Thank you. Okay. So thank you, John Lee, for your excellent presentation and thank you, Dr Zhang, for your participation and discussion. So to the members of the audience, we'll send an email to everyone here today asking for your thoughts on how the webinar went. So if you could please fill out the feedback form, we'd really appreciate it. It will help us make UTS:ACRI events in the future a better experience for all involved. So once again, if you would want to know more about the Australia-China relationship and about our research, more details are available on our website at australiarelations.org. The discussion today will also be available there. Please follow us on Twitter for the latest news. And that's it for today. So thank you for all our speakers and to all our attendees, and we'll see you next time. Thank you.