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How AI could impact geopolitics

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Allison Nathan: The rise of AI isn't just a tech story. It could have profound applications for energy markets, for geopolitics. And to better understand all this, I'm sitting today with Jared Cohen, who is our President of Global Affairs and co-head of the Goldman Sachs Global Institute. Jared, welcome back to the program. Always a pleasure to have you.

Jared Cohen: Thank you very much.

Allison Nathan: So, Jared, we have had a lot of discussions on this program about the many ways that AI is shaping markets, the many ways that it could shape industries and economies. But you're focused on what it could shape even beyond that. Why is this an issue for the US?

Jared Cohen: So, look, when it comes to AI, there's a lot of known unknowns, right? Will it be open weighted models over closed models that win out? Will the use cases ever justify the enormous spend? Who will be the winners and losers? These are all very interesting questions. None of them are urgent.

There's a very urgent question right now, which is the one that I'm focused on, which is if AI software has to run on AI hardware somewhere, can the US maintain a leadership position when it comes to generative AI? And the answer comes down to a larger question about whether or not the infrastructure can be built the keep a pace with the demand.

And the punch line is the US can maintain that leadership position. The infrastructure can keep up with demand. But not exclusively in the US. To me, this is the most urgent known unknown because if the US wants to continue to dominate in this AI journey and AI revolution, it's going to need options outside of the US to augment and supplement that.

Allison Nathan: Why can't the US do this? What is the constraint there? Is it just a funding issue? Or is it actual physical limitations?

Jared Cohen: So, there's no shortage of funding in this space. The hyper scalers are set to spend roughly 1.1 trillion dollars on the higher end in CapEx associated with meeting AI demand. The issue is if you look at the 8,000 data centers worldwide, there's roughly 3,000 in the United States. Those data centers have very low vacancy. So, you have less than 3 percent vacancy rates. So, that's one problem. Is we don't have enough space in existing data centers.

Second problem. If you look at our existing data centers, a lot of them support cloud workloads. AI workloads are ultra high density requiring a concentrated source of power. Right? So, it's a very different kind of engineering problem. So, the question becomes can you retrofit existing data centers to accommodate AI workloads? It's either prohibitively expensive, not practical, or just not feasible. So, we have a need for differentiated data centers as a second problem.

So, we have a vacancy problem. We have a need for differentiated data centers.

But let's say we figure all of that out. AI workloads, because they require a concentrated source of power, that power also has to be largely baseload. So, intermittent power like solar and wind don't work. So, the US has plenty of baseload power. If you think about natural gas, there's an obvious short-term solution. Nuclear, which is a better long-term solution. In theory, the US has that baseload power.

But where that baseload power exists, transporting it to new data centers to run these AI workloads becomes a political problem. So, think, "not in my backyard." So that the US is going to need to bring another roughly 35 plus gigawatts online to meet this AI demand. We don't have enough differentiated data centers. And we don't have enough powered land to do it.

And so, the US is going to need some kind of an overflow option to deal with this hockey stick growth in power demand. And the issue is for decades we got used to power demand that was either flat or, frankly, declining. And our

energy grid is under an enormous amount of pressure right now. Extreme weather conditions. Delayed maintenance. Lag time associated with getting the permitting and necessary requirements for upgrades to that electric grid. And so, this isn't a "we need to figure this out by the end of the decade." Over the next 12 to 18 months the US is going to have to make a very important decision about where all of this AI infrastructure is going to get built. And it's not about nature, it's about geopolitics. It's nations that are going to be the ones who decide where these data centers are built.

And so, here's where the geopolitics has a tremendous and important nexus with what's happening technologically.

Allison Nathan: And so, what will that look like and what will be the implications for the US?

Jared Cohen: So, I think the US has three options for an overflow for building out AI infrastructure. And none of them are really great options. So, one option is you kind of keep it in, let's call it, the Jeffersonian-ish democratic world. Think Canada, the Nordic countries, Australia- great options- France. The problem is they're going to have a lot

of the same political issues that we have here in the US. And there's a risk in going all in on that.

So, geopolitically, you don't worry about those countries staying on sides. But you worry that they have a lot of the same kind of complicated domestic political issues associated with baseload power. Also, democratic countries don't have a track record of being able to do massive infrastructure at scale efficiently and quickly enough to meet this. So, we should try. And that should certainly be some of the play for AI infrastructure. But there's a risk that if you go all in on that type of country, none of it ends up manifesting.

Second option is you allow it to persist in the global south and you just kind of optimize for where there's cheap baseload power. That takes you to places like Indonesia and Malaysia. The problem there is if you think about the whole geopolitical thesis around this, the US wants to prevent China from getting AI capacity around these large language models. Indonesia and Malaysia, it's very unlikely that if they are able to become hubs for all this demand, that capacity won't be allocated directly to China. So, that's not a great option.

The third option, the Middle East. And the Middle East, probably more than any other countries, has probably the best attributes to accommodate all this. They have the cheap access to energy. They have an abundant amount of land. We all know they can build massive infrastructure at scale very quickly. They can build all this near the coastlines, which is very useful for technology around liquid cooling of the chips so they don't get overheated. They have the sovereign ambition. They have an enormous amount of capital that they can deploy flexibly and as they see fit.

And so, in the short term, the Middle East makes a lot of sense. By the way, a lot of the Middle Eastern countries have also proven a willingness under some pressure from the US to rip out a lot of the Chinese-made hardware to accommodate US interests and get those necessary chip allocations to be able to do this. The problem in the Middle East is fast forward, let's call it ten years from now, all of this AI capacity persists in the Middle East. And how do you know that they stay on sides? Right?

So, there's a longer-term geopolitical question of Saudi

Arabia, Qatar, UAE, these are all geopolitical swing states. They have enough economic wherewithal that on many issues they've been willing to kind of swing on an issue-by-issue basis. Their economic interests drive a lot of their geopolitical thinking. And so, if you think about the future, that AI capacity is very valuable. China's still their number one trading partner. So, how do you ensure that the geopolitics net out in the way that you want them to if you're the US government a decade from now?

So, none of these options are kind of a panacea to this geopolitical set of issues and the question of where the AI infrastructure is going to be built. If I had to guess, it's going to be some combination of the first option, which is keep it in the democratic world and biased towards the Middle East. And I think, by the way, under the new administration, I would suspect that there's going to be a larger gravitational pull towards the Middle East. And watch very carefully, depending on how things play out with the war in the Middle East and a re-architecture of the Middle East, if you end up with a scenario where there's a number of things that Saudi Arabia wants, there's a number of things the US administration is willing to give in exchange for normalization of relations with Israel and a

re-architecture of the Middle East, I would be very surprised if an allocation of chips necessary to build out AI infrastructure wasn't part of the equation.

Allison Nathan: Right. I guess my question to you is are these companies, these US companies leading this? Are they on board?

Jared Cohen: I think we're sort of early days on this. These countries in the Middle East have a lot of leverage to be able to get countries to set up shop on the ground. I think the inflection point is a shift from doing so in a performative way or in a reactionary way. I think what these countries would actually like is for the US companies to see the value of setting up shop there independent of the things that they want from these countries.

And I think we're not at the beginning of this, but that hasn't really reached its full maturity yet. But it's trending in that direction. I think it's going to be a long process.

Allison Nathan: Understood. But look, we've already seen, I think, in some other industries that process moving forward.

Jared Cohen: But these things take time, right? If you think about the big push towards India as an example to diversify supply chains away from China, move it to India, even in the world's largest democracy with a rich history of business that's been integrated with the US in a lot of ways for many, many decades, it's a long process there. And it doesn't happen overnight.

What I would say is there is right now a very pronounced we have/we need dynamic between companies in the US and the three Gulf countries of Saudi Arabia, Qatar, and UAE. And it's not just about capital. It's about capital. It's about energy. It's about a regulatory ecosystem that these leaders control. It's about the ability to do massive infrastructure quickly and at scale. It's about abundance of land. But it's also about an evolution in both the human capital and the mindset of these countries that all of the sudden changed the thesis.

Allison Nathan: And so, how does China fit into all of this? How is it positioning itself in this global AI infrastructure race, which it does not want to lose out on for sure?

Jared Cohen: So, for starters, if I had to describe the US/China tech competition before generative AI, I would have said the US had a three decade first mover advantage and it kind of ended in a tie because it was an asymmetric competition between the US and China. Most of those asymmetries disproportionately benefited China and the view was that those asymmetries are America's problem, not ours.

Then generative AI gave the US a lifeline in the sense that China had an uphill battle when it came to large language models because they didn't have the compute power with GPUs because of export controls. They didn't want to train models at internet scale because of the Chinese firewall. And the way they govern their models was incredibly restrictive. And you weren't exactly seeing large flocks of entrepreneurs moving to Beijing to set up the next large mega-cap company for all the things that we've seen happen domestically to companies that have experienced that journey.

That being said, necessity drives innovation. And right now, one of the things we're seeing China do is they're

trying to push themselves to have an efficiency renaissance where they're trying to capture efficiencies, both from an energy perspective and a performance perspective within the models.

Right now, it's an impressive R&D story. We'll see how it materializes. They're still behind. There's a lot of debate about how close they are to catching up. I think we don't really know yet. But they certainly have the human capital, and they have the resources to throw at it.

The second thing you're seeing them do is lean into some of this sort of race around data centers around the world. So, China has an initiative that they call Eastern Data, Western Computing. And by the way, they account for about 1/3 of the clean energy investments around the world. But they're investing 6.1 billion dollars in creating these different data center hubs around the world. Leaning into the fact that they're the number one trading partner still with a lot of countries. They have massive investments in nuclear power, which is something they're uniquely able to do. And so, it's this interesting story of contradictions.

I think last year they produced a record amount of coal

while, at the same time, producing a record amount of clean energy investments around the world. So, they have the ability to kind of wear different hats in this journey. And they certainly have plenty of resources. But this is existential for them. They can't afford to fall behind in this. They've been in the situation where they've had to catch up before. And they've successfully caught up before in a lot of different technologies. But there's never been a technology more important than this.

Allison Nathan: Why wouldn't they look to the Middle East to partner with the Middle East? And why wouldn't the Middle East find them a compelling partner?

Jared Cohen: So, that's a very good question. So, I mentioned before that Saudi Arabia, Qatar, and UAE are each what I would describe as geopolitical swing states. Meaning they have things about their economies that differentiate them that in a competition between the US and China, put them in this unique position where both countries need them to get ahead. And that gives them an enormous amount of leverage to kind of play both sides and act more geopolitically independent or quasi-independent.

It turns out that when it comes to AI infrastructure, because the US has so much unilateral power because of the allocation of GPUs, that that might be the limits of how much they can lean into that economic advantage to embrace this geopolitical swing state status because they can't build out the AI infrastructure for this new chapter of artificial intelligence without getting that allocation from the US, which requires approval from the US government. Right?

So, in the short and medium term, it's a binary choice. They can either lean into China on AI. Or they can lean into the US on AI. Again, I'm talking about, you know, for generative AI. AI is a very broad category. But I'm talking about for the most advanced chips. For the AI that requires the most advanced chips, it's a binary choice. And right now, you're seeing each of these countries lean into the US.

Allison Nathan: And how much does the fact that Donald Trump is going to be our president again shortly weigh into that binary choice? Does that matter a lot in terms of thinking about some of the policy shifts he seems to want to pursue?

Jared Cohen: So, when it comes to US and China, my view is this is the issue that has the most bipartisan consensus. It's the most important geopolitical issue. It's the foundational geopolitical theatre that is why I believe the geopolitics are more uncertain than they have been in at least three decades.

When Donald Trump was president the first time, he was the first one to change the policy. The policy for multiple administrations, Democrat and Republican, had been bring China into the liberal international order and they'll conform, and everything will work out.

Trump got the US off of that policy and pivoted towards a tough, protectionist posture on China. I think that America's allies and partners, were surprised when Joe Biden came in and didn't just continue Trump's policies but was actually even more protectionist than his predecessor. And I think whether you got Harris or we're getting Trump, it's going to be the case that each administration is going to be tougher than the previous administration. I think that will continue at pace. I think the character of that protectionism doesn't particularly

change from one administration to the other. I think it just gets more intensified, right?

So, the caricature used to be that the Republicans like tariffs, Democrats like export controls. I think where it's netted out is they both like both. And, you know, we pay more attention to tariffs because Trump is very vocal about them. But a lot of people have a lot of opinions about what's going to happen when the 47th president takes office. I think that it's hard to imagine that you're not going to have an expansion of tariffs that touch this particular issue.

I think the thing that I would watch for is are there additional tariffs that we see that inadvertently impact the AI supply chain in ways that were not obvious. Right? Here you're talking about the refining and processing of certain critical minerals that go into the wafers. And, you know, these things, when an administration comes in, they do a lot very quickly. The transition team isn't the same thing as a fully staffed administration. They announce things on day one. And then the second and third order effects reveal themselves. But until we see what that first batch of executive orders are, it's impossible to know.

Allison Nathan: Jared, thanks so much for joining us again. Always interesting conversation with you.

Jared Cohen: Thank you.

Allison Nathan: This episode of Goldman Sachs Exchanges was recorded on Monday, November 25th, 2024. I'm your host, Allison Nathan. Thanks for listening.

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