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"Data Localization Policies are Bad for Consumers"

*How will the tug-of-war between centralization vs. decentralization of data ownership play out? How will new restrictions on cross-border data flows impact the rising data economy? What will the data value chain look like a decade from now? To answer these questions, we turn to one of the leading experts working on developing forward-thinking governance on AI and data: **YEONG Zee Kin**, Assistant Chief Executive of Singapore's Data Innovation and Protection Group and Deputy Commissioner of Singapore's Personal Data Protection Commission. This exclusive stars interview was conducted by Adithya VASUDEVAN, Co-Founder of DI Decision-Intelligence, on the sidelines of the 6th stars Singapore symposium.*

Adithya VASUDEVAN: How do you see the tug-of-war between centralization vs. decentralization of data ownership playing out, in different industries and verticals?
YEONG Zee Kin: If we were to look at the image of a spinning top, when you spin it, the forces make it go centrifugal, but with that force, with that interaction and reinforcement, the top spins and it stands up! When there is any imbalance, it topples. That's how I view privacy, consumer innovation and data protection – you can't have one without the other. You can't have innovation that goes on, on its own, because innovation should ultimately result in something tangible which gets into the hands of consumers and workers. Otherwise, what's the point of all that innovation and research? Once you realize that, you can only proceed as quickly as the consumer or worker who is prepared to make use of that new product or feature. This produces the reinforcing cycle. I think that one of the key things behind our strategy is that we've articulated a key adoption strategy. But for the adoption strategy to take effect – yes companies will come up with products and features and companies will want to bring in artificial intelligence (AI) empowered tools for their workers – workers need to be prepared to make use of these tools. We don't want a situation where they would turn away! So, the role of the worker and that of the consumer and the average human is very essential in the ecosystem. That's our approach.

How will new restrictions on cross-border data flows impact the rising data economy?
My own prediction is that data localization policies and laws, with time, will be scaled back. And this will happen for a very simple reason – for AI, particularly machine-learning, data is important. Something very fundamental about data analytics is that you want a representative data set, you want data from as many varieties of sources as possible. To have a robust model, you need to have data to test the model to uncover hidden biases. When you have data localization laws, by definition, you have a data set that is not representative, it will only exhibit features of populations within that country, and if you train machine-learning models and try to enhance features in products, you will be limited to a domestic market. So that's why my prediction is that with time, corporations within those countries will realize that one can't do machine learning in siloes. They will realise that they need to be able to bring the data together, and only then will they be able to have a globally competitive product. I think that day will come and I hope it comes sooner. I hope that policy-makers, law-makers and regulators realize that sooner, and go back to the fundamentals of data and the possibilities that can arise if the data were allowed to flow across borders but in a trusted manner. This is a message that needs to be spread and this is a point that needs to be made: you are doing a disservice to your domestic

companies because these regulatory restrictions to data flows have, in effect, limited them to their own markets.

What will the data value chain look like a decade from now? Which technologies do you anticipate will go obsolete? What new technologies do you foresee?
I think there will be new elements. My view is perhaps a little biased, because I sit here and I see what's happening in the region. The data value chain today is still very new. I've got data but the interrogation of the data, the quality of the data, the practices around data governance and quality – those are not robust. And those are the fundamentals at the beginning of the value chain. So, when you're talking about the value chain, you're talking about the simple movement of data through data-sharing, through interrogation that yield insights, and as they mature into more sophisticated things.

In the US for example, there are models of data brokers and data exchanges which you don't see that much here but you see some of it in China. That is one path that can be taken, but will that be a direct path? We don't know. But what we do anticipate is that, as more businesses want to make better use of the data, that is likely to ignite the demand for professional services around data quality, curation and preparation for data analytics. And that's one of those things that we want to build in Singapore. Then you're able to get better insights, and data sharing becomes another growth area. Of course, there are the other aspects to consider such as encouraging good data sharing. What are the governance frameworks that support the data sharing environment? "Out-of-Bound-Markers" (OB markers)? What are the practices? That will mature.

Up until now, I've only talked about professional services around this value-chain of good-quality data, data sharing and insights but as professional services mature, we can expect the monetization of some services. And once services become commoditized, we're looking at them being offered as platforms, tools and products, and that will beget another cycle. So, I think there will be evolution, a set of intermediaries – data intermediaries – will be formed, and in time we'll know what kinds of services these intermediaries will offer as platforms, and what they will offer as professional services. That's the promise of what's going to happen in the future.

What role do you see for a country like Singapore in the data economy, for the coming decade?
This is something that we've already started to do, in ASEAN especially. We've approached it from the philosophy that data flows should be accompanied with trust and good practices, because that's what we believe in. We're putting in place concentric circles within Singapore for cross-sector and cross-companies data-sharing, so that there are good practices around it.

When we move into the region, you see the varying state of data protection laws and awareness in ASEAN. To facilitate the development of personal data protection, which is increasingly important as ASEAN grows its digital economy, Singapore initiated the development of the ASEAN Framework on Personal Data Protection in 2016 which is a non-binding, baseline set of principles for ASEAN Member States. The intent is to build this data governance awareness and strengthen the business culture of protecting data that flows among ASEAN Member States, premised on a uniform set of principles that anyone in ASEAN can adopt. Just last December, Singapore built on this momentum by leading efforts to develop an ASEAN Framework on Digital Data Governance to facilitate harmonisation of data regulations. The Framework focuses on governance of data,

practices around data and the implementation of the data protection principles articulated in 2016. There are several initiatives identified under the Digital Data Governance Framework where we will see ASEAN, including ourselves, develop and drive over the next few years.

In the larger arena, we're active in participating in forums for enforcement and sharing of best practices. We're in the midst of completing our participation in the Asia-Pacific Economic Cooperation (APEC) Cross Border Privacy Rules and Privacy Recognition for Processors Systems, which will again be systems for cross-border flow of personal data with good practices, accountability and trust. This is one area where a lot more work needs to be done owing to the diversity of the APEC region. You probably know this: not everyone has data protection laws in place and those with data protection laws also differ in terms of policy rationale and implementation, so there's a lot of work to be done in this region.

What changes in policy would you support today for a better tomorrow, from both small (e.g. Singapore) and large (e.g. China or India) countries?
Let me tackle it in three tiers. In the area of global trade, we're part of the World Trade Organization (WTO) and we're part of various regional trading blocs and so we realize that for the benefit of our domestic economies, goods and services must be able to flow with little or minimal restrictions. This also includes opportunities for people mobility, people should be able to move around.

In the digital economy, data is another component supporting trade and movement of goods and services. You cannot have global trade if data cannot move. You can't have cross-border delivery of services if data is localized in one jurisdiction, and you have to physically move yourself locally to provide that service. So, from the trade angle, this is important. We engage in global trade because we want to bring benefits to our domestic markets, our start-ups and companies, our consumers. Consumers won't benefit as a result of policies that localize data. When you enforce infrastructure investment and you enforce the provision of services only from within that country, you do not benefit from modern technologies that thrive on connectivity and operate in a more borderless environment, like cloud services for example, and your consumer base will have to bear the additional cost of infrastructure investment into the country just to provide that service because of data flow restrictions. This doesn't do service to your consumers. You may end up compromising on quality and incurring higher overheads. As for companies, for instance, if you're using AI, but the data set you have access to is only locally based, how do you make a regionally competitive product? Because the features become too "over fitted", too fine-tuned for a very specific application. It may be useful within a market, but you're not competitive outside.

The third tier is for policy-makers and law-makers. As you're trying to tackle these things, one thing to bear in mind is that although there are a few things which are new, a lot of the things are still the same. Machine learning and AI is an extension and evolution of previous data science and data analytics practices. When we extrapolate from that, my position is that when you're looking at new laws around data protection, around trade and the flow of data, there isn't anything that is very new about it but there are principles that you can look towards. For data protection for example, we can look for established models. There is the European customized model – the EU General Data Protection Regulation (GDPR). Then, there are other models like the ASEAN Framework on Personal Data Protection which I mentioned earlier, the OECD principles, the APEC

Privacy Framework, and we now see Commonwealth Members moving into this realm to develop their own model of data protection. How do you then reconcile between these different models of data protection? Perhaps we should avoid re-inventing the wheel and focus on matching these models and pushing for interoperability of regimes. This will then percolate to companies working across borders as well as trade flowing across borders.

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