



GSMA's response to questions raised by Malaysian MP Ong Kian Ming on the Government's 5G proposals development proposals in Malaysia

In response to the questions put to the mobile network operators in Malaysia by Malaysian MP Ong Kian Ming¹, the GSMA has shared the following response.

The right market structure for the Malaysian mobile sector is critical in ensuring the Government achieves its digital ambitions for the benefit of consumers, enterprises and the wider Malaysian economy.

Below we provide high-level responses to those questions which have a relevant economic dimension. An overarching observation is that, although a debate on the options for deploying a national 5G network is welcome, such a debate should have taken place before the decision to proceed with the Single Wholesale Network (SWN) was taken and the DNB was established.

The GSMA commissioned the DT Economics report² referenced by Mr. Ong in question 9. The report showed that national SWNs have a poor track record of successful implementation in other countries³ and of the 70+ countries that have launched 5G networks, none have adopted a 5G SWN.

Against this international context, it would have been beneficial for stakeholders to have had access to MCMC's Regulatory Impact Assessment (RIA) outlining the cost and benefits of implementing an SWN in Malaysia.

1. *Question 2: The argument which DNB and the MOF makes is very convincing from an economics standpoint which is that it is much more cost effective for a single entity to rollout 5G given the high infrastructure costs involved. It would make much more sense, argues DNB and MOF, for there to be one multi-lane highway built for the purposes of 5G rollout where different lanes can be shared by the MNOs at a lower cost compared to each MNO building and owning their own highways. Some industry experts seem to agree with the arguments made by DNB and MOF. What is the industry's response to this argument?*

When deciding on the best approach to facilitate big telecoms investments one needs to trade-off the overall efficiency of the chosen approach against other relevant policy considerations.

¹ <https://www.digitalnewsasia.com/insights/now-malaysian-mp-ong-kian-ming-turns-attention-telco-ceos-seeking-5g-clarity-9-questions>

² <https://www.gsma.com/asia-pacific/wp-content/uploads/2021/09/DT-Economics-Safeguarding-the-road-to-5G-in-Malaysia-Final-report-August-2021.pdf>

³ We note that Brunei implemented SWN by nationalising the networks owned by the 4G MNOs in 2019 (<https://www.verdict.co.uk/5g-malaysia-brunei-swn/>).

Achieving economic efficiency is a fundamental objective of competition and regulatory policy because it enhances overall consumer welfare. There are three main components to efficiency in the context of 5G:⁴

- **Productive efficiency** e.g., how to ensure 5G services are provided at the lowest possible cost?
- **Allocative efficiency** e.g., how to ensure customers (residential and enterprise) have access to those services they value most? and
- **Dynamic efficiency** e.g., how to ensure firms continue to invest and innovate and provide mobile services which respond to the changing needs of their customers?

In our view the impact of the Government's 5G proposals risks leading to a less efficient provision of 5G services in the medium to long term, where end-users may be unable to get the services, they value most. We explain this in more detail below.

To date, there is little evidence quantifying the impact of the proposals on the costs of providing 5G services to end users

On the one hand, there could be significant efficiency gains from building a single national 5G network: this removes the additional costs of network duplication that occur when multiple operators roll-out their own networks. For instance, there are potentially fewer sites needed given only one network is being built and sharing of passive infrastructure, such as masts and fibre backhaul, is likely to bring costs further down when compared to the building of two or more stand-alone 5G networks.

On the other hand, creating a SWN at the expense of the current competitive wholesale market structure is not a guarantee that customer will pay a lower price for their 5G services at the retail level. For example, the DNB is likely to lack some of the economies of scope enjoyed by the MNOs which might lead to higher unit costs (this is because the DNB will only be providing 5G services, while MNOs will continue to provide services based on 3G and 4G, as well as 5G).

In addition, the MNOs' networks were built with forward-looking expectations that they would have been used to provide 5G services at the wholesale level. To the extent that this is no longer possible, MNOs – faced with reduced economies of scale and scope – may end up with stranded assets which would no longer be able to earn an economic return leading to significant economic inefficiencies at the detriment of consumers

Evidence to date also shows that the total cost estimates to build DNB in Malaysia have been increasing over time. In the absence of competitive pressure on network deployment, it is unclear how the Government and the regulator will ensure that DNB has incurred an 'efficient' level of costs to deploy a national 5G network.

⁴ DT Economics report paragraphs 3.21 to 3.33.

In the long term, end users may lose out due to reduced innovation

One of the potential drawbacks from having a national wholesale-only 5G provider in the market is that decisions on investments and service offering are made without the benefit of having 'direct' access to end-users.

To maximise **allocative efficiency** the DNB will need to work closely with the MNOs to better understand the need of their users and reflect these in the products and services it offers. Even with the best regulatory framework in place this cannot replace the benefits which come from cultivating a direct customer relationship. The DT Economics report highlighted that a key reason why Red Compartida in Mexico failed as a wholesale only 4G network was it's the inability to provide the services consumers valued most (e.g., 2G and 3G).

More importantly, **MNOs will have reduced opportunities for creating innovative products** as they become de-facto 5G MVNOs. First, the creation of innovative products for the enterprise market (e.g., low latency offerings), depends on DNBs capability and incentive to provide a range of wholesale products. Second, service differentiation is less likely to be possible in the mass market serving residential consumers (as many 5G enabled applications can already be provided over 4G networks).

Third, there is also a potential adverse impact on innovation from delinking network ownership from service delivery. For new 5G enabled applications to be successful, it is likely that a close coordination is needed between the 5G network and new 5G devices (such as handsets⁵). In the absence of vertically integrated MNOs this ability to coordinate is reduced. This may lead to delays in the launch of new services as well as a reduction in the level of service innovation more generally.

2. *Question 4: As a public policy maker that is interested in narrowing the urban-rural divide and as a former Deputy Minister for International Trade and Industry (MITI), I can see the attractiveness of a SWN model led by a government entity that would push for speedier deployment of 5G into the semi-urban and rural areas despite the initial lack of demand. The rapid deployment of 5G, coupled with the existing plans to rollout 4G in a complimentary manner by the MNOs will provide the impetus for jobs and investments to flow to lower cost semi-urban and rural areas in different parts of the country which would lead to an increased demand for 5G coverage and services. Would the industry players agree with this point of view?*

There may indeed be benefits to deploying a 5G network as a SWN covering all urban and rural areas, which would guard against the risk of cherry picking economically viable areas to the detriment of uneconomical areas.

However, there are significant risks with the current proposals. At this stage it is unclear how the DNB will be funded and financed. For example, it is our understanding that the requisite funding for the network (in the form of an anchor tenant) is yet to be secured. Therefore, there is a risk that the DNB may be unable to invest in the future, especially in rural areas where demand for 5G services will be lower and the costs of deployment higher. There is also a risk in

⁵ [Why Samsung and iPhone devices can't connect to 5G in Malaysia? Here's DNB's response](#)

delinking provision of 4G and 5G, which is likely to reduce the economies of scale and scope available to all operators in the market leading to higher prices for end-users.

A SWN is not the only option to address the digital divide between urban and rural areas. Other options that could yield similar consumer benefits while retaining the current competitive wholesale market structure include the following examples:

- **A shared rural network approach:** For example, the DT Economics report shows 5G deployment in the UK will be undertaken by the current four MNOs: Vodafone, EE, Virgin Media/O2 and Three. In parallel, the Government is supporting three initiatives to bring mobile connectivity to rural areas: the Rural Connected Communities, the Emergency Services Network and the Shared Rural Network (SRN). The SRN will address the 'market failure' in mobile markets by bringing 4G coverage to hard-to-reach (rural) areas, eliminate most of the partial not-spots and will be funded by both the MNOs and the Government (around £500m each respectively).
- **Relying on spectrum coverage requirements.** For example, a rural network coverage condition (with rollout within a certain time period) could be applied to MNOs who are assigned 5G spectrum.

More generally, in any big infrastructure project, there are always risks of delays and other unexpected developments. There is merit in the Government adopting a flexible approach by considering other options such as allowing current MNOs to use their existing spectrum to provide 5G services, to build 5G networks in certain geographies/for certain customer segments and/or enter into co-investment agreements with the DNB.

3. *Question 6: One of the key arguments put forth by DNB is that the MNOs should focus on competing based on service offerings rather than the speed and connectivity of their network under 5G as data and data access are increasingly being commoditised. From my own understanding, there has been little innovation especially in terms of value-added services for the SMEs and the manufacturing sector. If the MNOs are freed up from having to focus on the 5G rollout and are "forced" to compete based on service offerings, wouldn't this lead to a more innovative mobile telco landscape, for businesses as well as individual consumers?*

There is an important economic principle which states that, in general, **competition is the best way to ensure continued investment and innovation**. In the absence of competitive rivalry what incentive will DNB have to continue to invest and innovate at the wholesale level?

The technical characteristics of 5G (e.g., virtualization and network slicing) are likely to allow MNOs to more easily differentiate at the service level compared to previous mobile technologies. While 'virtualisation' will result in more easily programmable networks that are less dependent on the underlying hardware, 'network slicing' allows a single physical network to be separated into multiple virtual networks, allowing operators to differentiate services hosted on a single network.

However, even with the technical characteristics of 5G, there are several additional issues which would need to be addressed:

- As discussed in the answer to Question 2 above, with a SWN **MNOs will have reduced opportunities for creating innovative products as they become de-facto 5G MVNOs.**
- MNOs will be **entirely dependent on DNB for service choice and quality** – given the innovative applications which 5G is expected to provide to end users, some with time critical delivery requirements, it is imperative that the DNB is required to adhere to clear QoS rules (such as robust SLAs and SLGs in contracts with access seekers).
- It is unclear how the **resilience and security of DNB will be ensured.**

Finally, MNOs already compete at the retail level – removing their ability to build their own 5G networks is unlikely to increase their incentives to compete ‘more’ at the retail level.

4. *Question 8: Does the industry see any upsides in having DNB rollout the 5G network initially and giving an option for MNOs to buy stakes in DNB after a significant portion of the 5G network has been rolled out, let’s say by 2024? Would this lessen the concerns on the part of the MNOs that DNB would “abuse” its position as a monopoly and put unreasonable charges on the industry players for access to the 5G network?*

The SWN will in effect be a monopoly with exclusive rights to offer 5G wholesale services: this raises significant risks and will require carefully targeted regulation to mitigate any unintended consequences (as highlighted in the DT Economics report).

It is unclear that allowing **MNOs to buy stakes in DNB (at some time in the future) will lead to a more efficient outcome.** Important economic and financial questions will need to be addressed before implementing such a proposal. For example:

- What are the costs and benefits in allowing DNB to operate for only a narrow period of time?
- How, and at what level, will the unfinished network be valued at?
- Which MNOs will have the incentive and ability to buy a stake in an unfinished 5G network (and continue to build)?
- Will the original investors in DNB continue to own a share in the company or not? If yes, what will the scope of their continued involvement be?
- How will the Government ensure the incentives of the different MNOs with ownership rights are aligned?
- How will the Government ensure level playing field amongst all MNOs if there are variations in voting rights and/or some MNOs are outside the ownership structure?

More importantly, even if some MNOs had stakes in DNB, DNB would continue to be a monopoly provider of wholesale 5G services and therefore will need to be subject to regulation. In addition, the regulator will need to ensure the MNOs’ new commercial ‘relationship’ is compliant with competition law and be ready to step in should this not be the case.

5. *Question 9: Would DNB be more “acceptable” to the MNOs if it had more autonomy and a more “arm’s length” relationship with the Government of Malaysia to avoid possible conflicts of interest within the GoM, as recommended in this 5G evaluation report by DT Economics?*

This proposal will help ensure DNB is less politicised. However, as mentioned in answer to question 8, it would still be a monopoly with exclusive rights to offer 5G wholesale services and therefore its ability and incentive to behave in an anti-competitive manner will be unchanged. There will still be a host of significant risks to manage combined with the need for carefully targeted regulation to address any unintended consequences (as highlighted in the DT Economics report).

6. *Question 10: Would the MNOs prefer a Dual Wholesale Model (DWN) compared to the current SWN model with another entity building and rolling out another 5G network? If so, what would be the proposed ownership structure and responsibilities of this DWN model? For example, would a consortium-led entity be allowed to complement / compete against DNB for the 5G rollout or would the ownership structure of DNB be changed so that there are TWO non-government entities given the responsibility of rolling out 5G in Malaysia?*

The concern with DNB is that a competitive wholesale mobile market structure would be replaced by a monopoly which – by its nature – is likely to have reduced incentives to invest, innovate, provide choice and value for money.

A DWN would provide additional competition and is likely to incentivise the wholesale network providers to build the network faster and provide a better network/service. However, there are potential pros and cons with a DWN that would require a Regulatory Impact Analysis by MCMC to assess the cost-benefit from such a proposal.

An alternative option might have been to allow Malaysian MNOs to build their own 5G networks. A recent example of where 5G (Stand Alone) networks are being deployed successfully is Singapore. According to the regulator, as part of the 2.1 Ghz spectrum auction:⁶

- Both Singtel and M1-StarHub consortium are on track to establish two nationwide networks with full-fledged 5G SA capabilities with at least 50% coverage by end-2022, and nationwide coverage by end-2025.
- TPG, as the third operator, will be required to deploy a new 5G network in the same manner and time frame as Singtel Mobile and the M1-StarHub Consortium’s deployment conditions. TPG needs to roll out a 5G SA network with at least 50% coverage within two years, and nationwide 5G SA coverage within five years, from the commencement of its 2.1 GHz spectrum rights.

⁶ <https://www.imda.gov.sg/news-and-events/Media-Room/Media-Releases/2021/More-Spectrum-To-Support-5G-Growth-In-Singapore>