The impact on spectrum awards of the Covid-19 pandemic

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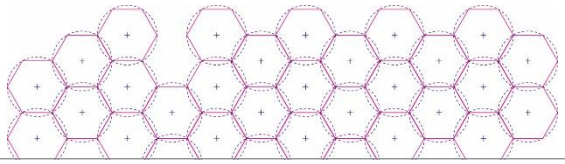

The rapid spread of Covid-19 across the world has left governments imposing increasingly strong measures to reduce physical interactions and keep their populations safe. Economies have stalled due to a crash in retail demand and unavailability of workers; for those that can continue to work remotely, telecommunications have become a vital lifeline. The importance of these links – voice links and, more importantly, the Internet – is not restricted to enterprise; with people confined to their homes, social interaction over videolink and other Internet services has increased exponentially. How can this demand be accommodated – and what does it mean for the way that spectrum is awarded and valued?

As Covid-19 causes the world's population to change its ways of living, telecommunications networks are becoming increasingly important. For the vast majority, the Internet (and, to a lesser extent, voice lines) has become the main way of socialising and working. Connections to the network have become akin to other utilities such as power or water, and network operators are having to consider how they can make their networks more resilient to meet the increased demand.

To an extent, some of the added demand can be accommodated in the overheads of the network. Operators will dimension their network capacity around a busy hour, which (nowadays) tends to be in the evening once families are streaming videos at home. Much of the increase in demand, conversely, is during the workday – with children accessing home schooling connections, and remote working requiring regular conference calls. There will likely be some requirement for greater capacity, either because this daytime usage requires greater bandwidth than streaming, or because more people are at home trying to stream each evening, but we should be careful not to overestimate the impact on networks.

Operators and governments are working to see how increased demand can be satisfied.

Nevertheless, operators and governments are working to see how such increased demand can be satisfied. One of the key drivers of 5G rollout in the short-to-medium-term was increased capacity for mobile broadband, and bringing investment in these networks forwards is one possibility. Alternatively, increasing the capacity of existing LTE networks may be more effective, given the current low penetration of 5G devices.

Some countries have opted to release spectrum to network operators on a temporary basis. In some cases, this is due to the postponement or cancellation of planned auctions (such as in France); in other countries the spectrum was already allocated to telecommunications but had not been awarded (like in South Africa); in yet others this represents a new assignment of spectrum to this service (such as the 5.9 GHz band in the US). In all cases the regulator has been clear that there will be a reassignment of this spectrum in the future.

The impact on spectrum awards

Perhaps the most obvious impact of the pandemic on spectrum management has been the postponement of a number of spectrum auctions and awards. There are very valid reasons for this – for an efficient outcome, we require bid teams to be able to place optimum bids, and remote working is not conducive to this type of reactive calculation. Further, it is common during an auction that board members may need to be consulted, but this may be more difficult, when they are not able to meet together.

There are some auctions which are planned to continue during the pandemic. These tend to be simple auctions for less contested spectrum bands, where the above issues are less likely to have an impact. The auctions must be run remotely, meaning that appropriate security measures are needed, but this is commonplace in spectrum auctions.

For those auctions that are being postponed, regulators will have a number of decisions to make once the pandemic is over. Should the auction be run immediately, or (if spectrum has been awarded temporarily) should there be a delay? If other spectrum was due to be auctioned, should the bands be combined into a single auction, or should all awards be delayed in turn?

The impact on spectrum value

It is not possible to determine at this time how spectrum value will change following the pandemic. There are a number of ways in which operators and the public may react.

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Changing use of telecommunications

As stated at the start of this briefing paper, the role of telecommunications has never been so important. Its use in maintaining wellbeing of the population should lead to an increase in the willingness to pay for the service. Higher willingness to pay would usually lead to a shift in the demand curve, and higher revenues for operators. In many countries, operators compete fiercely on price, but this change may enable them to move to competing on quality of service instead.

It should be noted, however, that due to the abstraction of digital services and the networks they run on, this is not always true. Consumers place value in the services they are able to access, and previous experience – particularly when moving from UMTS to LTE contracts – has indicated that people do not value their connection any higher when they have access to more services; rather, it is the services that carry the increased value.

Against this possibility of increased revenue, there is likely to be a severe economic recession following the pandemic, and the lower income resulting from this may negatively impact on telecommunications revenue. It is difficult to say, therefore, whether spectrum value will increase or decrease due to this.

Corporate behaviour from temporary licences

The granting of temporary licences will give operators the ability to roll out a network using new spectrum (or expand their current network). Whereas the operators may have previously been cautions about how the spectrum can be used, this is an opportunity for them to experiment with its effectiveness and the impact on capacity across the network.

Given this, we might expect this to increase the value of spectrum, since there is greater certainty over its benefits and operators may get used to having access to it.

However, the temporary nature of the award is likely to discourage operators from investing too much in new network equipment; the most common use of the spectrum will be to increase capacity on existing networks. If this becomes the expected use of this spectrum, rather than the new services that were predicted before, it may reduce the value of the spectrum to the operator and consumer.

Further, even where operators do decide to invest in new network, the limited labour market may lead to logistical problems in carrying out this work.

Artificial scarcity

Mobile operators – and to a lesser extent FWA operators – have been requesting access to new spectrum bands for a number of years, and any delay to planned awards will cause a further scarcity in spectrum stock. This scarcity should increase the value of spectrum. However, once the pandemic is over and all these postponed awards are held, there will be significant downward pressure on values:

- There will suddenly be a glut of spectrum available in any one country, meaning that scarcity is reduced.
- Multinational operators will need to fund spectrum acquisition in multiple locations, meaning their available funds for any one auction are reduced.

The impact on spectrum management

One question the pandemic has reawakened is that of social value. Telecommunications are being revealed as an essential service, and access to broadband is vital for all members of society – the social benefit is increasingly important. However, social benefit is not taken into account by spectrum auctions and many spectrum management frameworks. Governments may be encouraged to consider if the social value of spectrum should be included within regulatory decisions – potentially leading to lower annual fees.

However, there is a danger that governments may look to use spectrum auctions as a way to recover some of the money they are being forced to spend during the pandemic. If states believe that telecommunications are becoming more price inelastic, they may feel that a higher payment on spectrum would not adversely impact the industry. This would be a myopic move, with short-term government revenues leading to long-term consumer benefit losses.

Finally, while telecommunications operators continue to demand more spectrum, there remain competing demands from incumbents and other new users. As the importance of telecommunications at times like these increases, will governments and international organisations change their priorities when assigning spectrum between services?

Conclusion

It is too early to say exactly what impact the Covid-19 pandemic will have on the value of spectrum, and it is probable that each country will experience different effects. However, the importance of telecommunications has never been higher, and the role that network operators play in the economic wellbeing of countries must be emphasised. Governments should not look to profit from this importance by raising funds off spectrum auctions, but should instead consider how the social value of spectrum should be included in any awards.

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