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DATA SERVICES MARKET INQUIRY

SUMMARY OF PROVISIONAL FINDINGS AND RECOMMENDATIONS

Date: 24 April 2019

competition regulation for a growing and inclusive economy





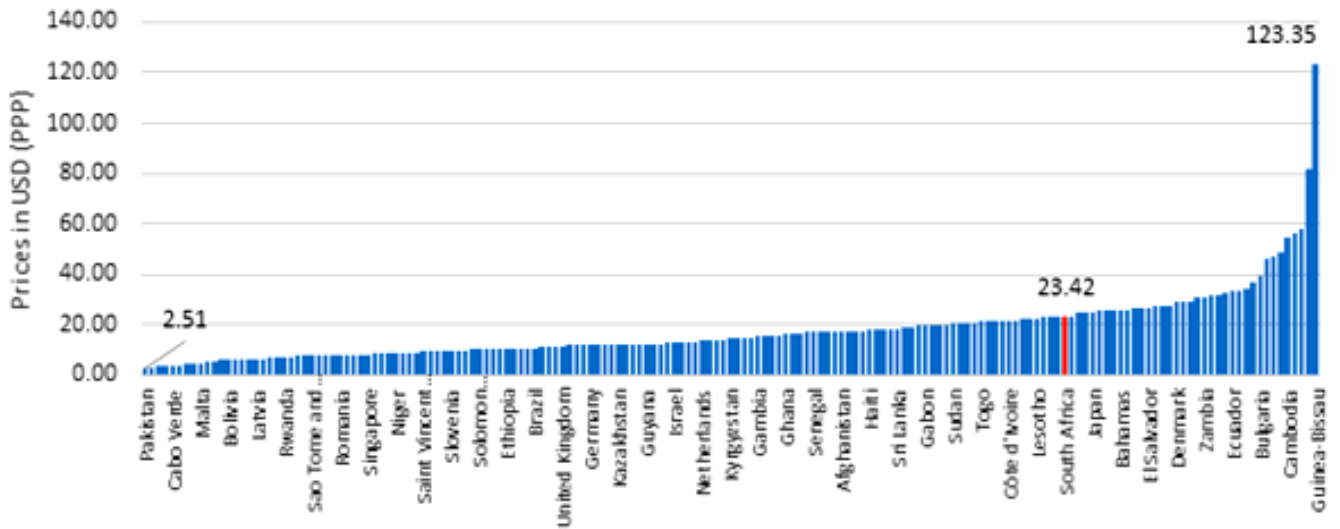
SUMMARY OF PROVISIONAL FINDINGS AND RECOMMENDATIONS

1. The Data Services Market Inquiry was initiated by the Competition Commission in terms of Section 43B(2) of the Competition Act No. 89 of 1998 (as amended) in August 2017, in response to a request from the Minister of Economic Development. The initiation of the Inquiry followed persistent concerns expressed by the public about the high level of data prices and the importance of data affordability for the South African economy and consumers. The purpose of the Inquiry as set out in the terms of reference is *to understand what factors or features of the market(s) and value chain may cause or lead to high prices for data services, and to make recommendations that would result in lower prices for data services.*
2. Following the initiation, a formal Call for Submissions was published on 20 September 2017. Sixteen submissions were received, including the major operators and consumer rights organisations. The Commission's Inquiry team also held public hearings in Pretoria from 17 to 19 October 2018 where oral and written submissions were received from 15 stakeholders. The Commission has also requested and received information on services and prices from major operators as well as information from other market players.
3. This report provides the provisional findings and recommendations of the Commission. At a number of points the report calls for further submissions. More broadly, the Commission invites stakeholders to make further submissions and provide comments on both the findings and the recommendations within this report by **14 June 2019**. This deadline for submissions will be strictly enforced in order to ensure the Inquiry can be finalised timeously. Submissions can be made electronically and sent to the following address: datainquiry@compcom.co.za.

Benchmarking confirms SA prices are high

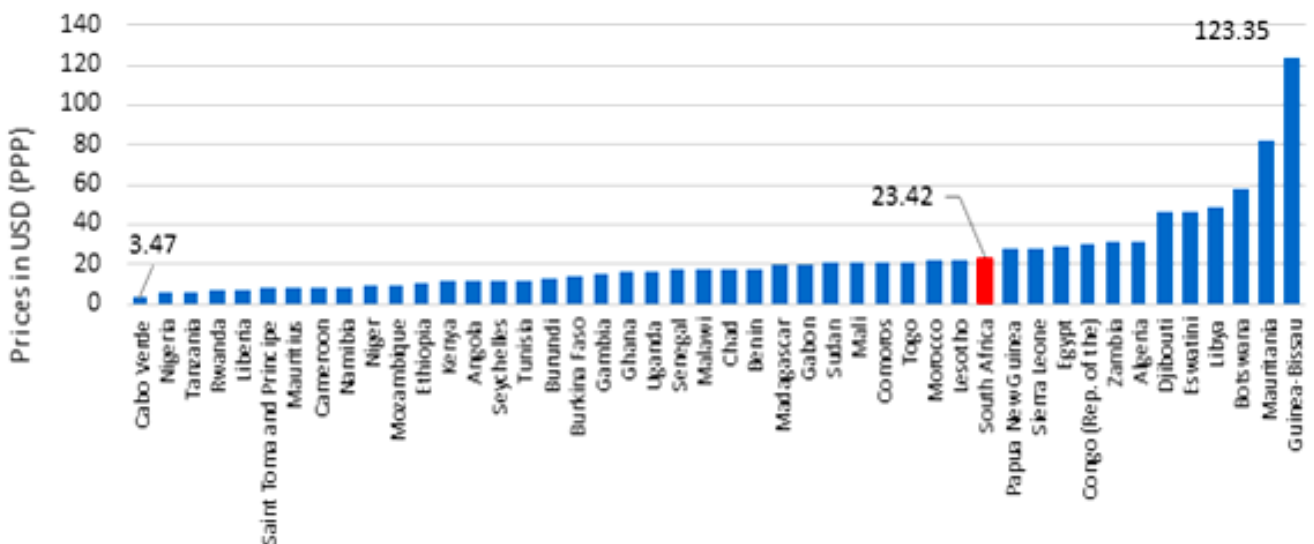
4. The terms of reference required that the Inquiry undertake an international benchmarking of South African data prices. Notwithstanding the challenges involved, international price comparison studies do have some probative value by providing a simple and effective cross-check on the general level of advertised prices in a market. Their use has become relatively standard internationally and the Inquiry was able to draw on an extensive volume of existing benchmarking exercises including that of the ITU, Tarifica, ICASA, and Research ICT Africa. Whilst effective prices, which incorporate free data offers but also data expiry, may differ to advertised prices, this is the case for all countries and not just South Africa.
5. The existing international comparisons on **mobile prepaid data prices** collectively indicates that South Africa currently performs poorly relative to other countries, with prices generally on the more expensive end.
 - 5.1. The ITU data shows that South Africa ranks poorly when compared across a worldwide selection of countries and is considerably more expensive than the cheapest offers. The ITU also finds that South Africa also ranks poorly relative to other African countries as a group. This is illustrated in the global comparison as well as the African comparison below.

Mobile prepaid data prices in USD (PPP), 500MB (2016)



Source: adapted from ITU ICT 2017 Prices report

Mobile prepaid data prices for African countries in USD (PPP), 500MB (2016)

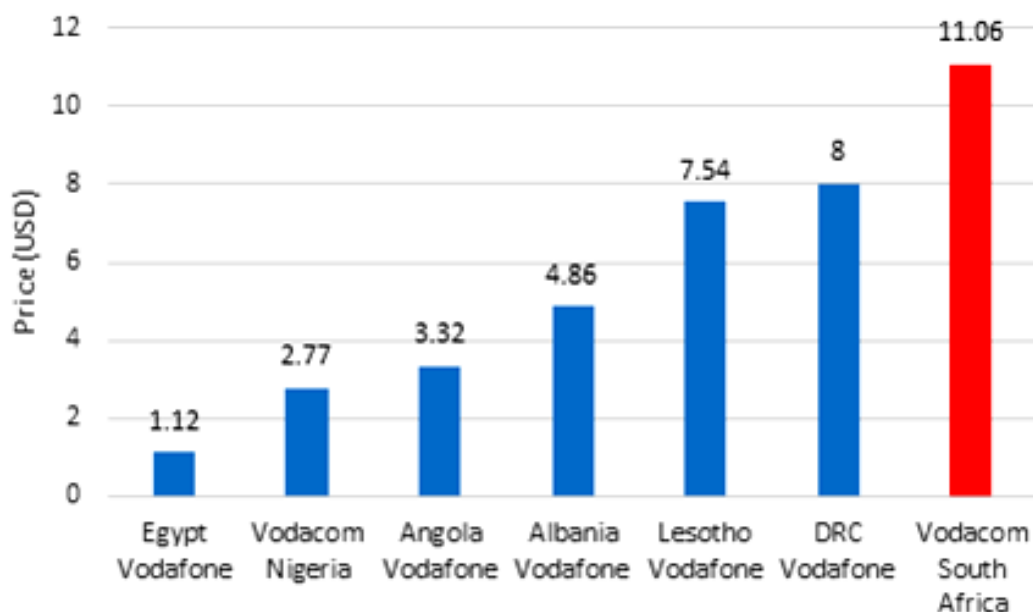


Source: adapted from ITU ICT 2017 Prices report

5.2. Tarifica’s most recent benchmarking report highlights South Africa’s poor performance in the ‘data-only’ prepaid market. South Africa ranks 17th overall in the prepaid mobile plans out of the selected 25 countries, where the overall ranking is based on an average performance score across consumer profiles. For different consumer profiles, Tarifica’s benchmark study shows South Africa ranked 14th out of 25 countries for light data-only users, 20th for moderate data only users and 22nd place for heavy data-only users. Tarifica notes there is scope for improvement, suggesting also that these results are driven by the higher prices of large operators.

5.3. ICASA’s latest tariff report on price benchmarking highlights South Africa’s prices are expensive compared to other countries. This includes comparisons across BRICS and SADC countries. Disturbingly, ICASA shows that Vodacom and MTN prices in South Africa are considerably higher than the prices they charge in other countries in which they operate. This is illustrated for Vodacom in the 1GB category below and for MTN across a few bundle sizes in the table below.

Vodacom 1GB retail tariffs across Africa (2017)



Source: adapted from ICASA Bi-annual Tariff report 2017

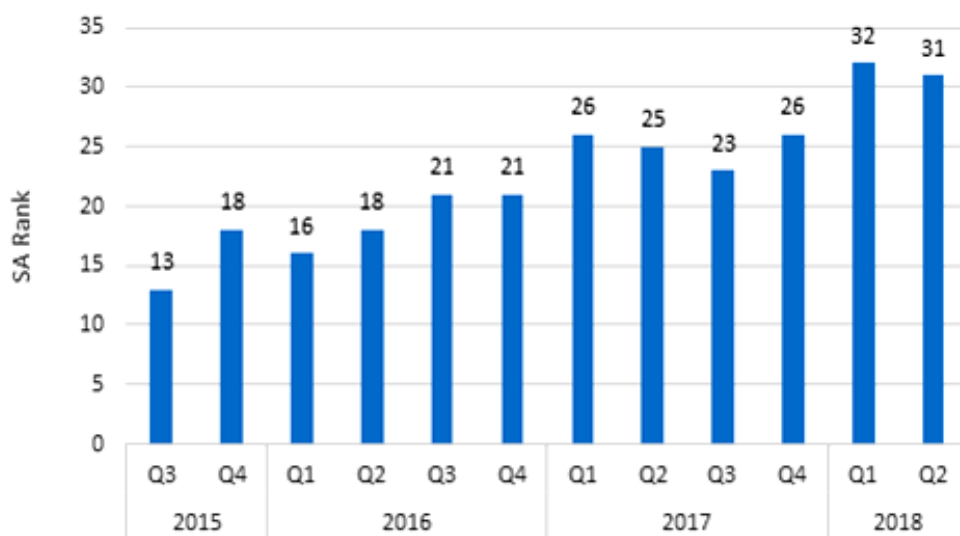
Prices for MTN pre-paid data bundles across countries (USD) (2017)

Country	500MB	1GB	2GB
South Africa	7.84	11.95	19.42
Botswana	N/A	12.53	19.33
Ghana	2.22	4.43	7.10
Ivory Coast	1.69	3.37	6.33
Liberia	N/A	N/A	0.04
Nigeria	N/A	3.15	5.04
Rwanda	N/A	2.32	N/A
Uganda	5.56	8.34	N/A
Zambia	1.69	3.41	6.75
Afghanistan	N/A	4.32	5.76
Benin	N/A	7.17	10.76
Cyprus	N/A	18.88	27.15
Iran	N/A	0.14	0.23

Source: adapted from ICASA Bi-annual Tariff report 2017

5.4. The latest benchmarking data from Research ICT Africa also shows that South Africa performs unfavourably against other African countries, where its 1GB data price ranks among the more expensive countries in their RAMP index with the gap widening over time as prices fall faster in other countries.

SA rank for 1GB price against 41 African countries (Q3 2015 to Q2 2018)



Source: RIA RAMP Index and data submissions to the Commission, 2019

6. Interestingly, South Africa performs better on the same international benchmarks for mobile **post-paid data prices** relative to the pre-paid data prices, although South Africa is still considerably more expensive than the cheapest country from the global ITU sample. Benchmarking by Tarifica, #datamustfall and MyBroadband information also suggests that South Africa's post-paid packages are better priced than its prepaid offers. This finding indicates a potential structural problem with retail prices in South Africa, whereby poorer, prepaid consumers are exploited with relatively higher prices than the wealthier post-paid consumers.

Anti-poor retail price structures lacking transparency

7. The disturbing finding from the benchmarking exercise that lower income consumers may be exploited to a far greater degree relative to

wealthier consumers for mobile data prices is confirmed by the Inquiry's assessment of retail and effective price structures.

8. An assessment of headline retail prices of all mobile operators demonstrates that consumers of small data bundles, generally being poorer consumers, pay inexplicably more on a per MB/GB basis. For instance, relative to a 1GB data bundle, a consumer buying a 100MB data bundle will pay roughly twice the price on a per MB basis for the same data period validity. A consumer buying a 50MB bundle will pay up to three times more and a 20MB bundle up to four times more. In addition, the Inquiry also found that punitive out-of-bundle (OOB) rates are more frequently imposed on purchasers of small data bundles or indeed those that do not commit to a bundle at all. These are generally the lower income consumers.

The extent to which the per MB prices of smaller bundles exceed the per MB prices of larger bundles (Dec 2018)

	% higher than 1GB			% higher than 2GB		
	20-30MB	50MB	100MB	20-30MB	50MB	100MB
Cell C	236%	115%	95%	302%	157%	133%
MTN	275%	213%	119%	362%	285%	169%
Telkom	193%	193%	193%	317%	317%	317%
Vodacom	168%	236%	95%	221%	302%	133%

Source: Tarifica, operators' catalogues, websites and online sources

9. Operators have sought to argue that smaller bundles on short validity periods compare more favourably. Whilst that may be the case, a 20MB bundle valid for a day is still about 66% more expensive than a one month 1GB bundle on the Vodacom network. However, the very short validity period also makes that smaller bundle more likely to expire, making the effective rate likely higher still.
10. Operators have also argued that this gap in the prices paid by lower income consumers narrows once one takes into account the effective rates paid, which include better priced short-validity bundles as well as free and promotional data. The Inquiry has tested this assertion based on a large sample of subscribers on each network and found that it is not the case. The sample shows that subscribers consuming between 100-500MB per month can pay more than twice per MB compared to consumers of 1-2GB per month. This is far worse for even poorer consumers, with those consuming between 50-100MB per month paying up to three times more and 20-50MB around four times more.
11. The Inquiry has also found that consumers of smaller data bundles tend to be far more exposed to out-of-bundle (OOB) rates, which also serves to increase effective rates payable by typically lower income consumers. OOB payments have been found to be up to half the data spend for small bundle subscribers relative to more negligible levels for large bundle subscribers. This makes intuitive sense as subscribers able to afford larger bundles of data may be less likely to run out of in-bundle data.
12. Trends in per subscriber usage levels across pre-paid and post-paid subscribers show the effect of the relatively higher prices for pre-paid. Whilst usage amongst post-paid subscribers is growing materially, usage for pre-paid subscribers is relatively flat by comparison. This suggests that pricing is limiting the ability of lower income subscribers to make greater use of data services, which in turn restricts the benefits of the digital economy to this class of consumer.
13. The lack of transparency over the effective rate that consumers are paying for data across networks to the consumers themselves is of a material concern for the Inquiry. This rate may be higher than the headline rate for some given out-of-bundle rates kicking in and data expiring before use, or lower than headline rates given free or promotional packages. The lack of price transparency inhibits price competition as consumers are not aware of the effective rates paid which limits their ability to compare across networks. Consumers may mistake the occasional promotion or free data which goes unused as providing lower rates than may actually be the case. The additional concern is that occasional cheaper pricing to particular consumers or at points of time is not transmitted to other consumers and time periods through lower headline tariffs. Ultimately price competition is stronger where prices to more price sensitive consumers is transmitted to those that are less price sensitive. Therefore the touted shift to personalised pricing is of concern to the Inquiry.
14. The Inquiry is also concerned that this particular dynamic around pricing may be responsible for the anti-poor pricing structures that we observe in the market. Poorer consumers have far fewer opportunities to off-load from mobile data networks for their data service needs compared to wealthier consumers. Wealthier consumers are more likely to have a fixed broadband service at home, Wi-Fi at work and free public Wi-Fi at shopping centres or entertainment venues. It is quite likely that the lack of mobile off-load opportunities, combined with a lack of disposable income, are why the mobile operators are less inclined to drop prices to poorer consumers. This is because they have no real alternatives to turn to if pricing is not more competitive, and a drop in price will not result in a massive surge in data usage leaving the operator revenue-neutral.

A lack of spectrum and cost-based facilities access drives up costs

15. It seems to be common cause that the failure to release high demand spectrum due to delays in digital migration has left mobile operators with both insufficient spectrum and a lack of access to favourable low frequency bands, raising costs unnecessarily. This is because operators need to compensate for the lack of spectrum through increasing the volume of base stations, raising capital and operational costs. In a similar manner, different frequency bands have different propagation qualities which may impact on the extent of capital expenditure required to service demand in different areas. Low frequency bands are more favourable for less populated areas as fewer base stations are required to achieve coverage, but they are also better at providing indoor coverage even in dense urban areas. Digital migration should free up precisely these lower frequency bands.

16. Despite calls for the rapid release of high demand spectrum, this process has been subject to considerable delay and litigation. This delay was in large part due to the need to clarify policy positions in respect of the assignment of spectrum, including whether to support the introduction of a wholesale open access network (the WOAN) and whether existing operators would retain current spectrum and/or get access to unassigned high demand spectrum. However, after getting greater clarity as to the policy position there is a risk that the assignment process is once more delayed due to Departmental restructuring and the withdrawal of legislative changes to the Electronic Communications Act (ECA). The other threat to the process is that digital migration itself does not proceed rapidly and the spectrum is not available for use even upon assignment.
17. Whilst the release of spectrum will reduce operator costs, the Inquiry finds that this will not necessarily result in price decreases unless there is sufficient competitive pressure on mobile operators to do so. Furthermore, the actual assignment of spectrum, both in terms of volume and frequency bands, itself has an impact on the extent of competition in that market. For instance, the lack of assignment in low frequency bands such as that faced by Telkom Mobile currently is likely to result in a cost disadvantage, which may restrict how aggressive it can be on pricing. Spectrum assignment therefore cannot simply be undertaken on the basis of revenue maximisation, but must factor in how the assignment impacts on competitive forces if lower costs are to translate into lower prices. The assignment must therefore be pro-competitive in design.
18. Similar considerations arise in the context of the WOAN design. The purpose of the WOAN is to provide a wholesale network that may service a layer of new mobile virtual network operators (MVNOs) at the retail level in an effort to stimulate greater competition at this level. Originally, it was also designed to reduce infrastructure costs by promoting a single network layer, but that policy has subsequently been abandoned and rightly so. There are material competition concerns from creating a wholesale monopoly, from a pricing but also network quality & innovation perspective, and most of the cost-reduction gains can be achieved with better facilities access regulation. However, even in its current conceptualisation the WOAN needs to be designed in a manner that is likely to make it an effective competitor if the MVNOs that make use of it are to exert some competitive constraint and grow at the retail level. This requires consideration of funding and business models, not just the technical assessment of spectrum assignment as undertaken by the CSIR. If the WOAN is to be operated by an existing vertically integrated operator, then the design considerations will need to include ensuring vertical separation and cost-orientated wholesale pricing.
19. Another large cost driver is that of passive infrastructure, such as base stations and high sites, but also ducts and poles for fibre backhaul. The Inquiry is of the view that efforts to enhance facilities access and sharing can substantially reduce operating costs and ensure the rapid deployment of competing infrastructure, to the potential benefit of lower prices eventually. Indeed, operators have already engaged in mutually beneficial passive infrastructure sharing arrangements amongst each other in order to reduce operating or capital costs. There is also a legislative basis within the ECA for regulating facilities access and ICASA has put in place such regulations.
20. However, despite this there remain persistent complaints around gaining access to facilities and doing so on fair commercial terms. In reality, commercial models are typically successful where there is mutual benefit from bringing similar infrastructure to the table or agreement as to a mutual investment programme. Where there is inequity in passive infrastructure holdings between operators, there is often a resistance to infrastructure sharing by the incumbent holder of more infrastructure facilities. This is because a denial of access, or strategies that amount to a constructive denial, provides an incumbent with a competitive advantage over a newer rival and such strategic behaviour may also slow the expansion and competitive significance of the new rival. Whilst some operators argue that this may undermine the incentive to invest in new facilities, in reality the leadership position in facilities and other infrastructure is often a result of simply being a first-mover and historic restrictions on entry. This applies both to operators such as Vodacom in mobile facilities, but equally to operators such as Telkom in fixed line facilities.
21. The critique of current regulations is that they fail to address strategic behaviour by incumbents with a hold over a high proportion of facilities, namely that the regulations do not apply to all facilities (e.g. ducts and poles), fail to adequately deal with spurious claims that sharing is technically infeasible (e.g. on base stations), and

also do not regulate the price at which sharing takes place resulting in cost escalation. The Amendment Bill in respect of the ECA seemed to plan on tackling this regulatory vacuum prior to its withdrawal from parliament. In particular, it sought to institute cost-orientated pricing for facilities under a broader wholesale open access regime, the regulatory rules to which ICASA would put in place within 18 months of the Amendment coming into law.

22. The Commission has some concerns as to the full extent of the direction that such amendments take, in particular in respect of potentially mandating active infrastructure sharing. Whilst there is generally consensus that passive infrastructure sharing reduces costs and is beneficial to competition, there is less consensus that active infrastructure sharing is necessarily desirable under all circumstances. In particular, active infrastructure sharing increases the risk of collusion given the closer collaboration and greater extent of information access that such arrangements require. In addition, active sharing may also inhibit beneficial infrastructure-led service competition if it means additions to quality or service innovations are immediately shared with rivals. The direction taken should be facility-specific, weighing up the incremental benefits of moving to active sharing as against any risks to competition. The Inquiry is also concerned as to the potential delays that may occur in moving forward on this front, as the withdrawal of the Amendment Bill coupled with a proposed lengthy 18 month process for ICASA to complete any regulations in the event the Bill is resurrected suggest that it will be years before adequate movement on addressing facilities access is achieved.

Price-based competition in mobile markets can be improved materially

23. With the exception of Vodacom and MTN, there was consensus from the submissions that price-based competition amongst mobile operators was inadequate, including the ability of the challenger networks of Cell C and Telkom Mobile to effectively constrain the two first-movers. Based on the evidence before the Inquiry, we find that there is considerable scope to improve price-based competition in the mobile data services market.
24. The retail mobile market has remained stubbornly concentrated despite the entry of two challenger networks over time. Vodacom has a share in mobile services more generally,

and data services specifically, that exceeds the thresholds used in the Competition Act for a conclusive determination of dominance. MTN has constantly skirted around the threshold level where there is a rebuttable presumption of dominance. These shares have barely changed over time.

25. The pricing analysis undertaken by the Inquiry concurs that these two operators are to a large extent able to price independently of the challenger networks.

25.1. On headline data prices, Cell C has historically been more aggressive and yet the two larger networks have found it profitable to not follow their pricing downwards. As a result, it seems that Cell C has recently determined that it cannot win sufficient share by lowering prices and has proceeded to raise them back upwards. More recently, it has been the turn of Telkom Mobile to be more aggressive on pricing, dropping headline rates well below its rivals. However, the larger networks, especially Vodacom, have not sought to respond with lower headline prices themselves.

25.2. Whilst the two largest operators claim to respond in other ways, such as short-validity bundles and selective free or promotional data, the evidence on overall revenue per GB shows that there is still a large gulf between what they are able to effectively charge inclusive of all these items and what the challenger networks effectively charge for prepaid data.

26. The resilience of the dominant positions lends credence to the submissions which suggest certain market features serve to perpetuate the first mover advantages of Vodacom and MTN, and that the failure to regulate these in the past has contributed to this dynamic. The market features which seem to play more of a role are the following:

26.1. The larger subscriber base and levels of profitability of the two largest networks provides them with a considerable advantage in rolling out new technologies and services relative to the challenger networks. This is because the large capital expenditure requirements to provide wide coverage of such services and ensure sufficient capacity to maintain high network quality levels can be funded out

of retained earnings whilst still providing ongoing shareholder returns. In contrast, the smaller and less profitable subscribers of the challenger networks means they are not able to fund capital expenditure to the same level, in part because they need to do so through shareholder equity or debt funding. The constant battles Cell C has had with its debt levels and equity refinancing over an extended period are reflective of precisely this challenge for the newer networks. Telkom Mobile has had the benefit of a parent company with other business lines, but it is still having to fund new infrastructure with debt. This places the smaller networks at a disadvantage in providing the same subscriber coverage and network quality.

26.2. This in turn weakens price-based competition as lower prices from challenger networks do not necessarily get a pronounced subscriber switching response due to network quality differences. This permits the larger networks to be less responsive on price and maintain higher levels of profitability, perpetuating the cycle of higher levels of infrastructure expenditure. It also softens price competition from the challenger networks as aggressive price declines may become financially unsustainable, especially considering the need to still fund investment in infrastructure. Where there is an insufficient subscriber response, lower prices provide less revenue from which to fund capital expenditure. Where lower prices do attract subscribers, the network capacity will be placed under pressure requiring more capital expenditure but also risking the loss of subscribers if network quality degrades. The outcome is that the challenger networks may have to resort to softer price competition in order to protect their financial viability.

26.3. The greater scale built through the first-mover advantage provides other benefits to the incumbents, namely a lower unit cost base than the challenger networks. This means that challenger networks are less able to impose a real pricing constraint on the larger networks.

26.4. The stickiness of more valuable contract customers, more favourable site locations and spectrum assignments are also factors that have played into the hands of first-

mover networks historically, albeit that their role or effect may have reduced over time.

27. The findings in the retail market also point towards potential problems in the wholesale markets. This is because later entrants (and retail service providers such as MVNOs) generally rely on the wholesale supply of infrastructure and other services from first-mover operators for the supply of their own services. Whilst this provides an opportunity to provide challenger networks with some of the benefits acquired by the larger networks, the reality is that it is rarely in the interests of the larger networks to provide access, or to do so on fair and reasonable terms. This was evident with call termination rates, but is also evident in other areas where there is no current effective regulation. Aside from facilities leasing discussed above, the other areas include the following:

27.1. Wholesale roaming arrangements are necessary for challenger networks to achieve national coverage whilst still rolling out their networks. The bargaining dynamics in respect of these arrangements clearly favours the first-mover networks as the only ones with national coverage, as there are not really many outside options for the challenger networks. Furthermore, as the challenger networks desperately require such roaming agreements to be able to offer a national service, the incumbents have less need to contract which places them in a strengthened bargaining position. The evidence on historical agreements is consistent with these inequitable bargaining positions, with high minimum payments required, high marginal rates, poor roaming quality through lack of seamless handover and denial of roaming for new data service lines. Newer agreements seem to offer some improvement and will be reviewed in the next phase. However, unless roaming rates are more cost-orientated it will constrain price competition as more aggressive pricing by challengers will not be profitable if traffic occurs on roaming partners.

28. A further area where wholesale markets have visibly failed is in providing wholesale network access for the purposes of retail competitors in the form of MVNOs. This is an area where the incumbent networks have not been active, and only one network – Cell C – has emerged as a supplier of such services. Whilst technically there may be more scope for wholesale competition

for such services as all four networks may be potential options rather than the two for national roaming, it is apparent that practically this has not been the case. Given the inability of three networks to offer wholesale MVNO deals, this has left the option of making use of a single provider for those firms looking to launch MVNOs. This is not the kind of market scenario which results in competitive pricing. As a result, MVNOs are simply not a material feature of the South African market and have remained niche operations designed to provide benefits to support retention of other customer bases.

Addressing the fixed line supply gap for alternative data services

29. The overwhelming focus of submissions made to the Inquiry focused on mobile data services, which is unsurprising given that mobile data coverage is effectively universal and it is the primary means through which most consumers get data services. The submissions on fixed line were sparse, and maybe because much of the focus was on reducing data prices to poorer consumers, where the lack of fixed line infrastructure in those communities meant many stakeholders deemed it less relevant. However, the Inquiry remains interested in the fixed line supply of data services and the potential role it can play in reducing data prices more generally and to poorer consumers more specifically.
30. One reason for this interest is that fixed line supply remains the backbone in the supply of not just household and business access, but also public data services such as public Wi-Fi or even community networks. These represent alternative sources of data service, and therefore have the potential to provide cheaper (or even free) data services at different geographic places and/or different points in the day to consumers. This is in part because that infrastructure is frequently cheaper for large data volumes given costs are largely fixed and sunk. Indeed, if business models such as Vumatel's proposed R89 uncapped option for Alexandra can get off the ground then it would completely transform the data environment even for lower income households.
31. Cheaper prices are important in themselves, but also this infrastructure can be an alternative source of competitive pressure on mobile data services to bring those prices down. This is largely because fixed line services are typically provided through Wi-Fi at the point of use, and hence available for smartphones to connect to. However, such competitive pressure is only likely to occur if these services are far more pervasive (to give more opportunity for off-load), and if they also have reach into poorer communities which currently have no options outside of mobile and which are being exploited as a result.
32. The Commission is of the view that one cannot focus exclusively on trying to fix mobile competition as a solution to high data prices. Insufficient competition amongst mobile operators has been a persistent concern for decades, proving difficult to change effectively through interventions and also dependent on competitor firm performance. The Inquiry therefore considers that efforts to extend the reach of alternative infrastructure such as fixed line or fixed wireless into poorer areas, even if only in the form of public Wi-Fi, remains an important solution to high data prices now and in the future.
33. However, the legacy of apartheid and the economic characteristics of fixed line infrastructure means that this market has, and will continue to, primarily service wealthy, historically white, urban areas absent some form of intervention. In this respect, the market is failing lower income and rural households which most need the benefit of lower data prices, and which require alternatives to mobile where there is a pricing structure that exploits this position.
 - 33.1. The apartheid legacy meant that there existed a fixed line copper-based service through aerial poles or underground ducts in former whites only residential areas. This legacy infrastructure has enabled the more immediate provision of ADSL broadband services by Telkom Openserve to these residential areas at low incremental cost. In addition, the duct and pole infrastructure provides the basis of rapid and lower cost fibre rollout by Openserve into these same residential areas, making the deployment of FTTH in these areas far more likely. In contrast, the residential areas of historically disadvantaged South Africans generally lack this legacy infrastructure, making it far more costly to roll out such services in those areas. This includes not just the last mile, but also the metro fibre backhaul as apartheid spatial planning has resulted in lower income areas being spatially separate and far from business districts and wealthier suburbs. This in turn makes such investment far less likely and requiring investment from both backhaul and FTTH providers.

- 33.2. Aside from the cost of rollout, it is apparent that even for FTTH service providers that lack the legacy infrastructure of Openserve, the primary targets for FTTH roll out are the wealthy suburbs given that there is likely to be a better investment case in these areas. This is because for the largely fixed investment to make a return, the FTTH provider needs to be able to sign up sufficient households in an area. Wealthy areas have more households that a) have income levels sufficiently high to make FTTH affordable, b) are likely to already have data devices (tablets, smartphones, computers and smart TVs), and c) have the demand for high data usage applications which FTTH lends itself to services such as video streaming subscriptions. All things equal, the higher costs of providing infrastructure would still make the investment case less likely. In addition, lower incomes which makes fibre less affordable and more limited given the current demand for data hungry applications mean that fewer households will likely demand the service, reducing the investment case for rollout to these areas.
- 33.3. Even the rollout of public Wi-Fi has favoured the wealthy and has been insufficient in terms of coverage to give even those consumers numerous off-load opportunities. It would seem that public Wi-Fi outside of some metro government offerings has been limited largely to restaurants and shopping malls in wealthier areas. This is likely to be the case because there is more benefit to shops and restaurants providing such free services if it assists in attracting wealthier customers which have smart devices and may choose where to go based on the availability of a public Wi-Fi service. The lack of rollout by local government exacerbates the lack of public Wi-Fi access for lower income consumers as commuter and public service points outside of private businesses are unserved by public Wi-Fi.
34. Whilst there are some sporadic efforts at free public Wi-Fi through some metro governments and speculation on potential business models for township areas (located closer to business areas), it is self-evident to the Inquiry that this is far too limited and highly unlikely to result in market reach to the vast majority of low income and rural areas. The market is therefore unlikely to itself correct for this vast disparity in alternative infrastructure access for lower income consumers relative to wealthier ones absent some form of intervention and action.
35. It would seem to the Inquiry that if this is to change, then there are broadly two aspects of the market which require intervention. These are addressing the cost of infrastructure rollout to these areas and identifying innovative business models to provide affordable packages to low income individuals at home or free services in public.
- 35.1. The cost of infrastructure rollout is large in general for fixed line services due to the costs of trenching and the sunk fixed costs incurred upfront. Any strategy to address the market failure and support the extension of such services into lower income and smaller rural towns will need to find a means to reduce these costs. Cost reduction is important for another reason, namely that it reduces the hurdle requirements on the demand side to support the investment decision to rollout into those areas.
- 35.2. As the infrastructure also lends itself to localised monopolies, and is currently dominated by Telkom Openserve, not just the underlying costs of such infrastructure need to be reduced, but also there needs to be sufficient market and countervailing constraints such that these positions are not exploited through high pricing.
- 35.3. The cost structure also affects pricing, which is often at a level that enables recovery of the fixed costs. For FTTH this presents challenges as the absolute minimum monthly pricing to make services affordable to lower income households may still be uneconomic to support the investment decision. Innovation is therefore going to be required to make such services available and for businesses to invest in rollout. For free public Wi-Fi the challenge is likely to be different. The potential demand from a broader customer base in a public area may be sufficient to support the monthly service fees. However, funding this from a government perspective is likely to be challenging at a time of tight budget constraints at all levels of government. This too is going to require some innovation in business models in order to draw in private funding and lower the cost of service to government.

PROVISIONAL RECOMMENDATIONS

36. The Commission has identified a provisional package of recommendations that provide immediate relief to high prices, especially for low income consumers, combined with initiatives to improve mobile price competition and greater alternatives to consumers over the medium term.

Immediate relief on data pricing

37. The programme for immediate relief on data pricing includes the following recommendations on the level and structure of pricing:

37.1. A commitment by mobile operators to reduce headline tariff levels to the current effective level of charges inclusive of occasional free data and promotions, which ensures lower average rates are available to all subscribers, all of the time. The greater price transparency also promotes price-based competition.

37.2. A commitment by mobile operators to then reduce the price of sub-1GB bundles to within an objectively justifiable and socially defensible range of the 1GB price, provisionally a maximum of 25% higher on a per MB basis. This will provide immediate relief to lower income consumers using smaller data packages. A similar commitment on maximum out-of-bundle rates relative to in-bundle rates is also required as lower income consumers have been found to be more exposed to these, raising their effective data costs.

37.3. A consistent industry-wide approach to the zero-rating of content from public benefit organisations and educational institutions to ensure broad application.

37.4. Absent such commitments, regulators should coordinate around a legislative or regulatory means to achieve such outcomes which may include amendments to the ECA, additions to ICASA's End-User and Subscriber Service Charter Regulations, obligations or an investigation of excessive pricing to lower income consumers by the Commission.

38. This should then be followed by the urgent assignment of high demand spectrum and cost-orientated access to a broader range of facilities to **reduce infrastructure costs**, alongside

obligations to pass on cost savings to lower prices.

38.1. In the assignment of spectrum by ICASA, the objective should be to improve affordability and enhance competition. Any assignment should be contingent upon obligations to pass through cost reductions from greater spectrum access, alongside other obligations to improve affordable access. This may potentially include the provision of free public Wi-Fi in certain lower income areas or commuter routes, or the extension of fibre backbone infrastructure to such areas. Pro-competitive assignment may include spectrum caps on larger operators, asymmetric assignments and set asides for new entrants such as the WOAN, in a manner that ensures a prospect of commercial success.

38.2. The use of existing facilities leasing legislation and regulations to extend the list of essential facilities to include ducts and poles, but also to impose cost-orientated pricing requirements on such facilities. This should reduce costs, especially for challenger networks, and promote more rapid rollout of infrastructure to the benefit of greater price-based competition.

Intermediate programme to enhance price-based competition

39. An intermediate programme would look to find means to enhance price-based mobile competition and promote the development of alternative infrastructure to provide data services in lower income areas and smaller secondary cities and towns nationally.

40. In terms of **enhancing price-based competition** in the mobile industry, the Commission recommends more regulatory scrutiny and potentially action at the wholesale level of the industry in the event there are no voluntary commitments to improve the terms of wholesale access.

40.1. National roaming arrangements with the smaller networks need to move towards more cost-orientated pricing levels to support the ability of the smaller networks to be more aggressive on price without incurring losses on the roaming side, whilst using roaming as a means to expand capacity to still deliver a high quality data service to new subscribers.

- 40.2. The failure of operators to compete for MVNO arrangements also needs to be addressed, along with the level of wholesale pricing to resellers more generally. Whilst the WOAN has been proposed as one means to address this market failure, voluntary commitments to improve the terms of access amongst existing operators in the short-term, failing which regulatory action, is still most likely required as a more immediate solution whilst the WOAN gets established.
- 40.3. In both these cases, some form of functional and/or accounting separation may be required of the larger networks if there is to be greater transparency as to the costs of the radio access network (RAN) and core network relative to the retail services. Such separation may also provide more appropriate incentives to the network layer to engage in fairer access pricing to third parties relative to the operator's own retail division. These are certainly some of the lessons from the Telkom settlement agreement with the Commission which is widely perceived to have had a transformative impact on wholesale infrastructure access in fixed line.
- 40.4. In addition, the history of failure to engage in necessary wholesale regulation, not just of mobile but also fixed line markets, which has resulted in entrenched concentration strongly suggests that reform to the legislative and/or regulatory framework is most likely required if the institutions are to deliver on this type of regulatory action going forward. It would seem that not only are the preconditions for regulatory action under section 67 of the Electronic Communications Act (ECA) unnecessarily onerous, but they may also serve to limit the degree of collaboration between regulators. For instance, there would seem to be no basis currently on which ICASA could regulate based on findings by the competition authorities, either in market inquiries or as a result of enforcement action. More effective means of inter-regulator collaboration would strengthen regulatory oversight, enforcement and regulation in these markets. The current process to amend the ECA presents an opportunity to bring about such changes.
41. The **development of alternative infrastructure** to provide data services in lower income areas and smaller secondary cities and towns nationally will provide off-load opportunities from the mobile networks to free public Wi-Fi or even simply lower priced subscription Wi-Fi services. It will also provide an additional point of competitive pressure on mobile prices if there is a more pervasive presence. Whilst this is naturally occurring in wealthier areas, there are barriers to investment in poorer areas.
- 41.1. The Commission recommends that local and national government, under the lead of the Department of Telecommunications and Postal Services (DTPS), actively support the development of free public Wi-Fi in low income areas, including commuter points (e.g. train stations, taxi ranks) and public spaces (e.g. parks, shopping areas, government service offices). The initiative should look to crowd in private provision in order to reduce the cost and extend the reach of the programme. This will require innovation around business models, such as a limited free service in exchange for the ability to offer a premium subscription service or models based on advertising and/or data use.
- 41.2. Aside from free public Wi-Fi, government should look to use its own demand and facilities to reduce the costs of investment in both backhaul and last mile infrastructure into lower income areas, and improve the investment case with base customer demand. This would enhance the investment case for private providers to roll out infrastructure and/or use any base infrastructure to innovate around commercial models for business and residential supply in these areas. This initiative may begin with fast-tracking the intended rapid infrastructure deployment strategy which sought to facilitate greater ease in acquiring wayleaves and the use of municipal infrastructure such as poles for aerial deployment.
- 41.3. More generally, government should ensure that where it does make use of its procurement in these markets that this is done in a manner which supports a more competitive environment, be it through supporting smaller players / new entrants or facilitating open access on the infrastructure.



CONTACT PERSON

Jason Aproskie

Principal Economist

Economic Research Bureau

Competition Commission South Africa

datainquiry@compcom.co.za



competition commission
south africa

competition regulation for a growing and inclusive economy

T: +27(0) 12 394 3200 / 3320

F: +27(0) 12 394 0166

E: ccsa@compcom.co.za

W: www.compcom.co.za

The DTI Campus, Mulayo (Block C)
77 Meintjies Street, Sunnyside, Pretoria

Private Bag x23, Lynnwood Ridge
0040, South Africa