Commentary on the Georgian National Communications Commission's

Response to the policy report and expert opinion

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INTRODUCTION

The Response to the Policy Report and Expert Opinion Prepared by Consulting Companies for Magticom Ltd to the Georgian National Communications Commission (GNCC) (hereinafter, "GNCC Response" or "Response") does not address the main points of our submission on Introducing MVNOs in Georgia—A Reality Check (hereinafter, "Reality Check") regarding the economic viability of MVNOs in countries similar to Georgia. In addition, it misinterprets (and, at times, misrepresents) the details of the information on which it bases its "best practices" designation of mandatory regulation of MVNOs.

In the comments on the GNCC Response that follows we address these concerns and several others with respect to the GNCC Response, beginning with its labelling of mandatory MVNOs as "Best Practices."

1. Mandated MVNOs as a Best Practice

Having analyzed the GNCC Response, we have to conclude that it only confirms that the mandatory imposition on mobile network operators (MNOs) of MVNOs has not been reasonably justified for Georgia. Specifically, we contend that the GNCC Response fails to show that such regulation would be following "best practices" on a number of grounds:

1) The GNCC Response conflates the general prevalence of MVNOs and their potential market benefits (i.e., the benefits of MVNO entry without regulatory obligations under commercial agreements with MNOs) with the existence of a mandatory MVNO regulatory framework. While unregulated commercially negotiated MVNOs are relatively common[1], MVNO regulation of the kind GNCC is proposing is much rarer and cannot be considered "best practice;"

2) The Response confuses regulatory obligations imposed on operators under the competition provisions of telecommunications law—notably, obligations based on significant market power (SMP)—with the imposition of MVNO obligations on other grounds, such as spectrum licensing or merger approvals; and

3) The Response more generally misinterprets the European Union regulatory practices related to MVNOs, in part by relying on directly wrong information.

[1] At the same time, even the GNCC Response recognizes that MVNOs usually have a highly limited market share and hence impact on the market; specifically, the Response indicates "there are more than 1300 MVNO operating across the globe, with a combined market share of 63.3 billion US dollars that accounts for 2.46% of the world telecommunications market."

In addition, the Response grossly misrepresents information presented in the documents referred to in the rebuttal as well as misattributes some documents. For a summary of key instances of misrepresentation and misinterpretation of information in the Response, see "Fact Checks" in Attachment A.

Specific Key Examples

1. *What GNCC calls "best practice" (i.e. mandatory MVNO introduction based on the competition provisions of the telecommunications law or SMP-based regulation) is applied only by two countries out of 31 in the benchmark the GNCC itself uses. None of those are the European Union countries.*

Despite what is claimed in the GNCC Response, the Cullen International report it cites[2] suggests that only one European Union country mandates the introduction of MVNOs through imposition of obligations under the sector-specific telecommunications competition framework (so called, ex-ante regulations). Importantly, even the EU country in question (Cyprus), removed this regulation in 2019.[3] This means that at the moment no European Union country applies this type of regulation.

The only two countries covered in the Cullen International report that apply regulation similar to what GNCC proposes are non-EU countries and have rather specific market conditions. In Norway, one of them, two mobile operators (Telenor and Telia) control around 90 percent of market revenues.[4] In North Macedonia, the other country, there are only two mobile operators.[5]

It is true that 9 other countries reviewed by the Cullen report have certain obligations related to the MVNO introduction. However, the key difference between such obligations and the regulations considered by the GNCC is that such obligations where not *imposed* through telecommunications sector competition regulation, but accepted by the MNOs in question, either as a condition for obtaining certain spectrum assignments or as a condition of a merger between two MNOs.[6] Out of those 9 countries, at least four do not regulate wholesale pricing applied by MNOs to MVNOs; another two apply quite general "fair and reasonable" pricing criteria. Only two require MNOs to publish a reference offer.

In conclusion, even if one considers application of MVNO obligations in a broad sense, 20 out of 31 markets reviewed by the report referred to by the GNCC do not have any such obligations whatsoever. And 26 out of 31 such countries do not require a reference offer. In this context, the GNCC's insistence that the MVNO regulation is "best practice" is wholly unfounded.

2. *The GNCC Response states that the market for access to mobile operator networks should be regulated as per the methodology applied by European Union regulatory authorities. However, the European Commission in 2007 decided that generally the relevant market is not susceptible to such regulation. The*

[2] https://www.cullen-international.com/client/site/documents/CTTEEU20200025?version=this.
[3] https://ec.europa.eu/digital-single-market/en/news/definition-and-analysis-relevant-markets and http://ocecpr.ee.cy/el/content-menu/1-shetikes-agores-vasei-systasis-11is-fevroyarioy-2003/15-agora-15.
[4] https://www.nkom.no/ekom-markedet/markeder/marked-15-tilgang-til-mobilnett.
[5] https://www.gsma.com/membership/membership-types/operator-membership/.
[6] The report of the Body or European Regulators for Electronic Communications, referred by the GNCC, specifically applies to the post-merger market review, and not ex-ante telecommunications law-based market regulation.

Finnish regulator's attempt to regulate this market in 2004 was vetoed by the European Commission despite the leading operator (then TeliaSonera) having over 60 percent market share.

The GNCC suggests that market for access to mobile operator networks should generally be regulated under the "three criteria" test applied by the European Union regulatory authorities. The so-called ex-ante competition regime featuring such a test was introduced by the European Union regulatory framework of electronic communications of 2002. As per this framework, mobile market regulation follows these steps: (1) European Commission adopts a recommendation on relevant markets within the electronic communications sector susceptible to *ex-ante* regulation (preliminary "three criteria" test)[7]; (2) national regulatory authorities analyze the markets included in the regulation to confirm whether the "three criteria" apply in specific national circumstances; (3) if it is decided that such a market is susceptible to regulation, a regulator then determines whether there is one or more undertakings in that market that hold significant market power; and (4) only then are specific remedies to rectify the market failures imposed.

The first recommendation on relevant markets that the European Commission adopted in the course of the implementation of the 2002 regulatory regime[8] included a wholesale market for access and call origination on public mobile telephone networks (so called market 15; primarily as a carry-over from the previous regulatory regime). However, attempts by national regulators to actually regulate this market were largely unsuccessful. An attempt by Ficora, the Finnish regulator, to designate TeliaSonera as having significant market power was vetoed by the European Commission, despite TeliaSonera having more than 60 percent market share.[9]

Similarly, ComReg's attempt in Ireland to designate a significant market power operator in this market and impose remedies was annulled by an appeal body.[10] Ultimately, based on the experience of the national market analyses, in its first review of the recommendation on relevant markets, the European Commission removed this market from the list of markets considered by it as susceptible for regulation, despite recognizing barriers to entry in this market, including spectrum constraints.[11] As a result, as demonstrated in the figure in Attachment B, currently no country in the European Union regulates this market.

2. Pricing Implications of Mandated MVNOs

The GNCC Response claims that mobile service prices in Georgia are high and it implies that somehow mandating MVNOs will reduce these prices. Yet as we show below, the Response does not benchmark mobile prices appropriately, nor does it provide evidence that mandating MVNOs will lower current prices.

[7] "Three criteria" test means that the market is considered susceptible to ex-ante regulation based on the following criteria: (a) static – the presence of high and non-transitory entry barriers whether of structural, legal or regulatory nature; (b) dynamic - only those markets the structure of which does not tend towards effective competition within the relevant time horizon may be regulated; (c) insufficiency of the general competition law – i.e., that the application of competition law alone would not adequately address the market failure(s) concerned. Source: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32003H0311.

[8] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32003H0311.

[9] https://ec.europa.eu/commission/presscorner/detail/en/MEMO_07_457.

[10] Cullen International report referred in the GNCC Response.

[11] https://ec.europa.eu/transparency/regdoc/rep/2/2007/EN/2-2007-1483-EN-2-1.PDF.

Specific Key Examples

2.1. *The methodology, used by the GNCC and its consultants (Strategy Analytics and Teligen) to compare mobile prices, grossly (up to 3.8 times) inflates mobile prices in Georgia compared to other countries included in the benchmark.*

The GNCC benchmark compares the prices in US dollars adjusted by the purchasing power parity (or PPP). Such methodology compares relative prices – that is prices of mobile communications compared to prices of goods and services in a country in general – rather than real prices. This means that the lower the prices of goods and services in a given country, the more expensive mobile communications prices appear in comparison.

Based on the World Bank data,[12] the general price level in Georgia is the absolute lowest from all the countries compared by the GNCC consultants – only Turkey comes close. For example (looking into the countries that demonstrate low mobile prices in the GNCC benchmark), a general price level in the United Kingdom is 2.8 times higher than in Georgia, meaning that 1 US dollar in Georgia can buy 2.8 times more, and that, relatively, the prices for telecommunications services in United Kingdom are shown 2.8 times lower in relation to Georgia than they really are. (See Attachment C.)

In Australia this number is 3.4 times, Estonia – 2 times, Iceland – 3.7 times, Lithuania – 1.7 times, and Germany – 2.7 times. For Switzerland, it is 3.8 times. Simply put, the GNCC benchmark shows prices in Georgia 3.3 times higher than they really are, whereas it shows prices in Iceland 10 percent lower than the effective prices. This is a highly misleading misrepresentation, especially having regard to a high proportion of mobile operator costs (mobile equipment, etc.) being incurred in foreign currency through purchases from foreign vendors.

2.2. *On the issue of the impact of mandatory MVNOs on service prices, our analysis showed that even among EU countries, in those where some form of mandated MVNO presence has been imposed, service prices have on average increased rather than declined.*

In the case of countries at the same economic level as Georgia we found that the price of "the price of 1 GB of data in the context of a mobile broadband subscription...is higher on average for countries where MVNOs have been fostered or allowed to operate—$0.59 on average for the lowest available price compared to $0.34 for the non- MVNO countries."[13] The difference is also significant for average prices—namely, $1.90 versus $1.24. And the countries with the highest number of MVNOs among those we examined (Indonesia and the Philippines) had the highest average prices.

Yet much of the GNCC Response assumes that mandatory MVNO regulation is an easy way of securing lower prices in Georgia. We do not see evidence of this in the GNCC Response or in the broader analysis we conducted in both advanced economies and in countries at a similar economic level as Georgia's. Moreover, the GNCC Response itself recognizes that within Georgia, "there is no customer outflow between the operators, namely, no customer flow into the network of the low-price operator..."[14] This

[12] World Bank. World Development Indicators. As we do not have detailed input data used by Strategy Analytics /Teligen, we used the data for 2019 – therefore results of our calculations could slightly differ from the input data used by the GNCC consultants, but the principle holds.
[13] See pp. 26-27 in BDO and Kalba International, op. cit.
[14] GNCC Response, p. 7.

suggests that there are other factors in why individuals select particular operators besides their price plans, such as quality of service and coverage (remote areas, within buildings, etc.).

3. Economic and Innovation Prospects of Mandated MVNOs

Our initial "Reality Check" submission focused on the economic viability of MVNOs in Georgia and their role in creating innovation in the mobile sector of the Georgia, based on the assumptions of the prior consulting report prepared for the Georgian National Communications Commission (GNCC) by its consultant.[15] Our contention is that a multiplicity of sustainable MVNOs, particularly innovative ones, should not be expected in Georgia given the evidence from economically similar countries.

The GNCC Response fails to address these main points and the importance of the results that mandatory MVNO regulation is likely to produce. This could indicate the GNCC's concurrence with our conclusions. However, given the GNCC Response's attention to Georgia's position in relation to the advanced economies of Europe and not to comparable countries, we assume the GNCC is simply disregarding the analysis we have provided, preferring to focus on regulatory process aspects rather than the likely results of imposing mandatory MVNOs in Georgia.

Specific Key Examples

1. In "Reality Check" we emphasized the need to examine MVNO development in countries at Georgia's economic level, and we provided extensive analysis and documentation that MVNOs have generally not thrived or in many cases even survived in countries at a similar economic level as Georgia.

Examining 25 such countries, we found on average only one MVNO per country, not the flourishing of MVNOs suggested in GNCC's original consulting report, plus multiple cases of MVNOs having been launched and then closing down. As an example, in Ukraine, a country much larger than Georgia, we found only two operating MVNOs (while four others have withdrawn from the market).[16]

2. We also examined the prospects that innovative MVNOs would emerge if a mandatory MVNOs regime were imposed and that this would foster an innovative ecosystem in Georgia, as had been suggested in a consulting study prepared for the GNCC.

In actual fact, we found that the MVNOs in countries similar to Georgia in economic terms are rarely innovative from an applications or technology standpoint. Instead they are most likely to be based on the provision of voice services and are often developed by enterprises that are based in or originate from other countries. It is therefore reasonable to project that local innovation is unlikely to result if mandatory MVNO regulation is imposed in Georgia. The most likely MVNO service on this basis is likely to come from Turkey or Russia, as this is where Georgia's largest diasporas are based.

This is not to suggest that mobile innovation itself cannot originate or thrive in countries at Georgia's economic level. In fact, two of the most innovative developments in mobile services were first introduced

[15] PwC, Recommendations document on national roaming access terms and conditions, as well as MVNO access terms and conditions, Based on Agreement No <something is missing>

[16] BDO LLC and Kalba International, Inc., Introducing MVNOs in Georgia-A Reality Check, May 28, 2020 (English version), p. 20.

in emerging economies, namely Mexico and Kenya. Mexico was where prepaid mobile services first appeared in 1992 (spreading to the whole world), while Kenya was where a highly successful mobile money (m-pesa) service originated. In both cases we note that the markets had strong operators who were able to persevere with the development of these services until they were widely accepted.

At the same time, even in advanced economies, mandating MVNOs does not always result in innovative services being made available. We provide a case study on Hong Kong, one of the first jurisdictions to introduce mandatory MVNOs (2000) and to require 30 percent of the spectrum released at that time for 3G use to be reserved for MVNMOs. Yet MVNOs took several years to form and generally offered voice service (e.g. cross-border calling to mainland China) rather than the new data-based applications that the government had hoped for.

3. The GNCC has also made the related suggestion that MVNOs would serve niche market segments, providing "... niche services, new telecom market segments and, accordingly, innovative business models that the introduction of the MVNO regulation opens up opportunities for."[17]

At the same time, the GNCC Response provides a figure on which the brand images of about 20 MVNOs appear. What the GNCC Response does not acknowledge is that (1) many MVNOs in the illustration provide mainly voice services, (2) many of the featured MVNOs have encountered major market or financial challenges, and (3) many of the cases are not independent MVNOs but rather affiliates of the MNOs in their countries.

Nor are there many examples of innovative or niche-oriented MVNOs. Specifically, in examining these "reference" MVNOs, we find that they include:

- *TracFone*, the largest MVNO in the United States, which has been owned by the largest MNO in Mexico is being sold to Verizon,[18] the largest US MNO, after losing several million subscribers in recent years;
- *BT*, which started as an MVNO on the EE network, is now owned by an MNO, since BT acquired EE and its mobile operations and is hardly a niche operator;
- *Boost Mobile* has been the affiliated MVNO of Sprint in the United States and has been sold to Dish, the entity becoming the new fourth MNO in the United States, following the acquisition of Sprint by T-Mobile;
- *Ono io*, a provider of "quad play" service (fixed and mobile) in Spain which was originally owned by a cable TV operator and is now owned by Vodafone, one of Spain's MNOs;
- *Lyca mobile*, as we noted in our analysis, lost more than 250,000 subscribers in Tunisia between 2017 and early 2019 and has abandoned the Hong Kong market;
- *telenet*, originally an MVNO operator in Belgium (owned by a cable TV operator), is now owned by Base, one of Belgium's MNOs;
- *Simple Mobile*, like Tracfone (its owner), is not an independent MVNO;
- *free mobile* is also not an independent MVNO but part of one of France's MNOs;
- *h2O* is an MVNO that has been owned primarily by Japan's KDDI, an MNO in Japan, until its sale in 2019 to an entity in the United States, where h2O operates;
- *ay yildiz* in Germany provides a service aimed at the country's Turkish community but is owned by one of the MNOs, Telefonica; and

[17] GNCC Response, p. 23.
[18] "Verizon Buys Prepaid Carrier Tracfone," PC Magazine, September 14, 2020.

- VERTU, a luxury phone brand, originally spun off by Nokia, launched an MVNO in the UK and grew to more than 350,000 subscribers in 2013, then declared bankruptcy in 2017.

In sum, most of the MVNO examples that figure in the Response report are not niche service innovators or in many cases even independent MVNOs. Most market primarily voice services and hardly any operate in emerging markets. It is surprising that these would be used as reference cases by GNCC unless the expectation is that mainly foreign MNO-affiliated entities will introduce MVNOs in Georgia under the proposed mandatory MVNO regime.

4. Incorrect Conclusion Regarding Investment Implications

The GNCC Response implies that mandatory MVNO regulation will facilitate rather than impede future network investment and development For example, it cites the conclusion of a report on MVNOs as stating, "With the introduction of MVNO, MNOs can shift focus from the retail segment, partly with their own infrastructure, to the wholesale service segment where, if MVNO is introduced, they will have quite a high EBITDA margin and are better positioned to focus on the network development."[19] Moreover, the GNCC Response continues, in addition to the revenues from wholesale services, MNOs recover network expansion investments from MVNO.[20]

Yet market evidence does not support the above investment assertion. We note the key case at this time of 5G network investments, which are occurring globally. In Shenzhen, China alone, 50,000 5G cells have already been activated and all need to be linked to the core network on high-capex fiber facilities. The related investment requirements in the base stations and backhaul network are very high.

Specific Key Examples

4.1. At the same time, *European countries, where MVNOs have flourished more than anywhere in broad regional terms, have not shown a particular ability to invest in 5G infrastructure because of the presence of MVNOs. Nor have those countries where MVNOs are mandated been clear leaders in the deployment of 5G networks, which call for significant investment.*

4.2. *Similarly, where regulatory models encouraging wholesale and retail separations have been introduced, there is no widespread evidence of the viability of such models.*

We can site the examples of attempts to introduce wholesale 4G operators in Kenya, Mexico and South Africa as failing so far to prove their viability, if only because retail operators have been reluctant to use the wholesale facilities.

Overall, the risks and uncertainties of imposing mandatory MVNOs on the cusp of 5G introduction should be quite evident. With 5G, based on mid-band or millimeter-band spectrum, operators will need to make much larger investments in infrastructure as well as spectrum. The network of base stations will be much denser than what has applied in the case of networks based on low-band spectrum; the backhaul fiber network will need to be much higher capacity and much more intricate; and the process of securing and

[19] http://www.nereoconsulting.com/pdf/MVNOBusinessEssentials.pdf
[20] GNCC Response, p. 22.

building on many more sites will be much more expensive than establishing the smaller number of larger towers and cells that underlie today's mobile networks.

5. Erroneous Representation of ITU Position

The GNCC Response asserts that the International Telecommunication Union supports the mandatory regulation of MVNO introduction. However, what it refers to as "ITU definitions and recommendations" are merely a 20-year-old paper published by a researcher without any affiliation with the ITU. Furthermore, the GNCC Response misrepresents the information in the paper.

Specific Key Examples

5.1. To support its position, the GNCC refers to the "ITU (International Telecommunication Unit) definitions and recommendations for regulatory authorities as to how, by what essential principles and in what cases to introduce the mandatory MVNO access regulations (https://www.itu.int/itunews/issue/2001/08/mvno.html)." *This paper is published by Patrick Xavier, researcher without any affiliation with the ITU, in 2001.*

Interestingly even the Xavier paper notes that "[s]o far, MVNOs that have obtained access to host networks have done so through commercial negotiation." It also suggests that "[s]ome analysts argue that regulation should facilitate the operations of MVNOs since they offer consumers a wider choice of services and applications at lower prices, and thereby result in a more efficient use of the spectrum. Others argue that the mobile environment is sufficiently competitive, and that the advent of 3G operators will further increase competition and that regulatory intervention in support of MVNOs is unnecessary."

5.2. Furthermore, the Xavier paper notes that "[t]he views of regulators towards MVNOs varies significantly at present. Regulators in many countries are still considering whether (and if so to what extent) regulatory intervention, including the regulation of access price and conditions is necessary."

What the GNCC Response presents as *ITU recommendations* are actually prefaced by text that states "Those in favour of regulation argue..." *In other words, the points referred to are simply a representation of potential arguments for regulation.* The article also sets out "arguments against regulatory intervention," which the GNCC Response omits to mention. Therefore, the part of the document on the ITU definitions and recommendations highly misrepresents the authorship of the paper and then proceeds with an attempt to a misleading representation of the content of the paper.

5.3. Another document, which the Response refers as ITU report of 2019, is merely an article in *ITU News* on an event and views of different participants exchanged there[21]. No ITU-affiliated person or ITU report referred in this article (or, for that matter, other documents referred in the Response) provides any suggestions on whether or not to regulate MVNOs.

6. Mischaracterization of Israel and Canada

[21] https://news.itu.int/mvnos-telecom-world-value/

The GNCC Response quite inadequately characterizes two countries that are cited as examples of MVNOs fostering positive market development, namely, Israel and Canada. In both cases the references to these countries do not accurately reflect the respective market situations or MVNO prospects,

Specific Key Examples

6.1. In commenting on the development of MVNOs in Israel, one of the countries covered in a case study provided as part of our submission, the Response refers to an OECD report which affirms that "the entry of MVNOs [in Israel] has significantly promoted the sector development and the market liberalization" and notes "new MNOs have also appeared in Israel (2 new mobile network operators -- Golan Telecom and HOT Mobile since 2012)."[22]

In addition, the Response claims that the fact that Golan telecom paid $34 million for a 5G license and spectrum "shows the positive trend that the entry of MVNO to the Israeli telecommunications market and the liberalization of the telecommunications segment have produced."[23]

In fact, the OECD report does not refer to MVNOs in describing the changes affecting the mobile market in Israel.

6.2. In addition, we do not find the association made in the Response between Golan's high spectrum price and the entry of MVNOs as very credible.

First of all, the spectrum "price" cited was the winning bid amount of Cellcom (Israel's first competitor to the original MNO, Pelephone) *in partnership with* Golan and Marathon Telecom.[24] Secondly, the price cited is an artificial one in that the Government had offered the operators $141 million of incentive grants to deploy 5G base stations.[25] This was done in recognition of the poor financial state of the industry. Third, the amount of spectrum involved (a total of 130 MHz in three bands) is considerable. Fourth, the government has delayed any payments for the spectrum until late 2022. And, finally, almost concurrent with the spectrum auction, held in August of this year, the Government announced its approval of the acquisition of Golan Telecom by Cellcom, another indication of the industry's financial state.

In sum, the details behind the $34 million *price* matter considerably. Moreover, how much operators bid for spectrum can be affected by different factors, including capacity requirements, the costs of network densification without additional spectrum, and the financial cycle, among others. At the same time, no general analysis showing a relationship between spectrum bids and the introduction of MVNOs has been put forward to our knowledge. The point remains that Israel's industry is facing growing and not fewer challenges, irrespective of the MVNOs' arrival; this is reflected in part by its relatively late adoption of 5G compared to not only the world leaders (South Korea, China, U.S.) but also other countries, including in the Middle East.

[22] https://read.oecd-ilibrary.org/science-and-technology/wireless-market-structures-and-network-sharing_5jxt46dzl9r2-en#page1
[23] GNCC Response, p. 28.
[24] "Israel concludes 5G spectrum auction; MoC approves Cellcom's purchase of Golan Telecom," TeleGeography GlobalComms Database, Aug. 14, 2020.
[25] Steven Scheer, "Israel holds 5G mobile network tender, aims for 2020 launch," Media and Telecoms, July 16, 2019.

6.3. Finally, we note that the GNCC Response refers to the Canadian mobile market and an initiative to introduce MVNOs to this market. Moreover, it suggests there are strong parallels between the Canadian and Georgian markets and that Canadian developments support GNCC's mandatory MVNO initiative. In the process, *the Response does not recognize (or at least acknowledge) the large differences between Georgia's and Canada's mobile markets, including Canada's vast territory and associated mobile coverage challenges, its advanced economy and much higher ARPU levels, and its efforts over 25 years to foster competition at the MNO level, not to mention its regulatory structure (involving a spectrum auctioning ministry and a competition authority as well as a sector regulator).*

Canada's expansion of competition began with the licensing of two PCS mobile operators in the 1990s. However, these operators did not fare well and were acquired by two of its three main operators. Several years later the government encouraged new entrants with the help of set-aside spectrum at spectrum auctions that only new entrants could secure, resulting in their paying lower prices for the spectrum. Again, the new entrants were in general unable to sustain themselves in a capital-intensive mobile market, where network deployments call for major outlays, and were bought out by the incumbent MNOs.

Eventually, a second round of new entrants has emerged, three of them affiliated with existing cable TV operators and one with a traditional provincial fixed operator. These operators have started to compete with the traditional MNOs though largely on a regional basis and not a national one. Service prices for certain data packages have gone down, generally where the new entrants have large amounts of excess capacity. However, in the process the existing operators have added internal "flanker" brands, effectively discount operators. These new MNO brands have attracted considerably more subscribers in the aggregate than have all the new entrants. How mandated MVNOs will fare within this context remains to be seen, including whether this will result in the new MNOs increasing or decreasing their share of the subscribers.

7. Insufficient Recognition of Security Risks of MVNOs

Last but not least, the GNCC Response rejects concerns about the potential security risks of MVNOs.

Specific Key Example

The GNCC explicitly states that its resolution mandating introduction of the MVNOs does not cause serious security concerns.

This is directly contravened by the ITU document the GNCC Response refers to in support of its position, namely ITU standard “ITU-T X.805 (Supplement on security guidelines for mobile virtual network operators).”[26] This very document states that “it is inevitable that MVNOs face serious security threats due to inadequate security practices and requirements, which are very different from the security requirements of traditional network operators." It adds, "Generally, the security capabilities of MVNOs are weaker than those of traditional network operators. MVNOs are becoming the main targets of security exploits

[26] https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-X.Sup30-201709-I!!PDF-E&type=items.

LIMITATIONS

The general limiting conditions pertaining to this document are summarized below:

- The information presented in the response will be used by the Company for managerial purposes and may be disclosed publicly.

- This response is based on the latest information made available to us as at the completion of our work on 4 November 2020 and we accept no responsibility to update it for events that take place after the date of its issue.

- The document is based on data, estimates and forecasts that appear to be reliable. To the best of our knowledge, the statements of facts contained in this document, upon which the analysis and conclusions are based, are true and correct. Information, estimates and opinions furnished to us and contained in this document or utilized in the formation of the conclusions were obtained from sources considered reliable and believed to be true and correct.

- The response may only be used in conjunction with a report issued by BDO and Kalba International Inc. on 28 May 2020 under the agreement signed by BDO LLC and Magticom Ltd dated 1 May 2020, as it relates to some issues outlined in the mentioned report. This response may not be reproduced, in whole or in part, and the findings of this document may not be utilized by any third party for any purpose, without the express written consent of BDO LLC. No change of any item in any of this document shall be made by anyone other than BDO LLC, and we shall have no responsibility for any such unauthorized change.

- BDO and Kalba International, Inc. hereby represent that they are independent and have no interest with respect to this research. Our fees were determined in advance and did not depend on the results of the project.

ATTACHMENT A: FACT CHECK ON GNCC BEST PRACTICES REFERENCES *

GNCC Says	In Fact
GNCC is aiming to mandate MVNOs as per the European best practice (this refers to the GNCC decision to mandate MVNOs in Georgia under telecommunications law obligations (SMP-type regulation)	Only two countries out of 31 in the benchmark used by the GNCC do so. None of those is a member country of the European Union
Regulated MVNO regime is best practice	Even if one considers imposition of any MVNO-related obligations in a broad sense, 20 out of 31 markets reviewed by the Cullen International report referred to by the GNCC do not have any such obligations whatsoever. At least 24 countries do not impose any price regulation. 26 out of 31 of such countries do not require reference offer. Most common practice is MVNOs operating under unregulated commercial agreements with MNOs.
Mobile market is susceptible to regulation under the "three criteria" test applied by European countries under the European Union regulatory regime	Although, in 2003 the European Commission included a wholesale mobile access and call origination market into a list of markets that regulators should review under a "three criteria" test to consider whether regulation is needed, during the first review of the recommendation on the relevant markets it was removed from such list. The decision to remove was based on the experience in actual market reviews by the regulators – that is, regulators deciding not to regulate that market in practice.
Prices in Georgia are high and this justifies mandatory introduction of the MVNO	Methodology, used by the GNCC and their consultants (Strategy Analytics and Teligen) to compare mobile prices, grossly (up to 3.8 times) inflates mobile prices in Georgia compared to other countries included in the benchmark.
Mobile communications market in Georgia is concentrated hence the regulation is needed	Finnish regulator's attempt to regulate the market for wholesale mobile access and call origination was blocked by the European Commission even though the leading mobile operator had 60 percent of the market – much higher than the market share of the leading operator in Georgia.
Recommendations and reports of the International Telecommunication Union (ITU) support the GNCC position	The alleged "ITU definitions and recommendations" actually refer to a 20-year-old paper published by a person without any affiliation with the ITU, which, furthermore, the GNCC rebuttal even fails to fairly summarize. No ITU-affiliated person or ITU report referred in any document cited by the GNCC rebuttal provides any suggestions on whether to regulate (or not) MVNOs.
Mandatory MVNO introduction poses no additional risks to national security	ITU document referred by the GNCC itself notes that MNVOs bring serious security concerns

ATTACHMENT B: STATUS OF REGULATION OF MARKETS IN THE EUROPEAN UNION – SEE EX-MARKET 15 *

Article 7 cases as at 19/05/2020

Effective competition - no ex ante regulation
No effective competition - ex ante regulation
Partial competition - partial ex ante regulation

n number of rounds of market analysis

	2014 RECOMMENDATION					2007 REC.		2003 RECOMMENDATION								
	Call term. on fixed network	Voice call term. on mobile networks	Wholesale local access	Wholesale central access	Wholesale high-quality access	Access to PSTN for res & non-res.	Call orig. on fixed network	Local/nat. Call for res.	Internat. call for res.	Local/nat. call for non-res.	Internat. call for non-res.	Retail LL	Transit on fixed network	[illegible] segments	Access & call orig. on mobile network	Broadcast Transmis.
	Market 1	Market 2	Market 3a	Market 3b	Market 4	ex-Mkt 1	ex-Mkt 2	ex-Mkt 3	ex-Mkt 4	ex-Mkt 5	ex-Mkt 6	ex-Mkt 7	ex-Mkt 10	ex-Mkt 14	ex-Mkt 15	ex-Mkt 18
Austria	3	4	5	5	5	4	4	3	2	4	3	4	1	2	1	4
Belgium	3	3	3	3	2	3	2	3	1	3	1	1	2	1	1	1
Bulgaria	3	3	3	2	2	3	3	2	2	2	2	1	1	1		
Croatia	2	2	2	2	1	2	2	1		1		1		1		
Cyprus	3	4	4	4	3	3	3	3	2	3	2	2	3	3	4	4
Czech Republic	4	4	4	4	3	4	4	2	2	2	1	2	1	1	2	2
Denmark	4	4	4	4	4	4	4	2	2	1	1	2	1	1	1	1
Estonia	4	5	4	4	3	3	3	1	1	1	1	1	1	2	1	3
Finland	2	1	4	4	1	2	3	2	1	2	1	2	2	1	V	3
France	5	5	5	5	3	5	5	1	1	1	1	2	1	2	V	4
Germany	5	5	4	3	2	4	3	2	1	2	1	2	1	1		5
Greece	3	4	4	4	3	3	2	3	1	3	1	3	1	3		1
Hungary	4	5	4	4	4	6	4	3	3	3	3	3	1	2		2
Ireland	4	3	3	3	3	3	3	2	2	2	2	2	1	2		2
Italy	3	5	4	4	2	3	2	2	2	2	2	2	1	2		2
Latvia	5	5	4	4	4	2	3	4	3	4	3	3	1	1		1
Lithuania	5	3	4	4	2	1	3	3	2	3	2	1	1	2		6
Luxemburg	3	4	3	3	2	3	3	2	2	2	2	2	1	1		
Malta	4	4	2	2	3	3	3	2	2	2	2	3	1	2		1
Netherlands	5	5	6	4	3	4	3	2	2	2	2	2	1	2		2
Poland	3	3	3	4	1	3	4	2	2	2	2	2	1	1	2	3
Portugal	3	3	3	3	3	2	2	2	2	2	2	1	1	3		2
Romania	3	3	2	1	2	2	2	1	1	1	1		3			2
Slovakia	4	5	3	3	4	4	4	2	2	2	2	2	2	1	1	2
Slovenia	2	5	4	4	2	3	3	2	1	1	1	2	3	1	3	3
Spain	4	4	3	3	3	4	3	2	2	2	2	2	2	4	2	4
Sweden	5	5	3	4	3	3	3	1	1	1	1	2	2	1	1	5
United Kingdom	3	5	3	5	5	5	4	2	2	2	2	4	2	4	1	2

ATTACHMENT C: COMPARATIVE PURCHASING POWER (1/PPP)*

Country	Compared to United States	Compared to Georgia
Australia	0.97109968	0.296188
Austria	1.17569145	0.358589
Belgium	1.18276355	0.360746
Canada	1.11141921	0.338986
Chile	1.68865644	0.515044
Colombia	2.43202563	0.741774
Czech Republic	1.84295824	0.562107
Denmark	1.00013475	0.305044
Estonia	1.6403784	0.500319
Finland	1.05418369	0.321529
France	1.22080474	0.372348
Georgia	***3.27866264***	***1***
Germany	1.21171166	0.369575
Greece	1.6034397	0.489053
Hungary	2.06236268	0.629026
Iceland	0.89717719	0.273641
Ireland	1.1217878	0.342148
Israel	0.9668303	0.294886
Italy	1.33164421	0.406155
Japan	1.07426259	0.327653
Korea, Rep.	1.35472976	0.413196
Latvia	1.80555052	0.550697
Lithuania	1.96418992	0.599083
Mexico	2.06940648	0.631174
Netherlands	1.13802287	0.3471
New Zealand	1.04439168	0.318542
Norway	0.88613355	0.270273
Poland	2.19411462	0.66921
Portugal	1.57574606	0.480606
Slovak Republic	1.76821261	0.539309
Slovenia	1.57955499	0.481768
Spain	1.42549467	0.434779
Sweden	1.08146563	0.32985
Switzerland	0.86578889	0.264068
Turkey	3.08268896	0.940228
United Kingdom	1.15152231	0.351217
United States	1	0.305002

* Calculation of "How Much 1 Us Dollar Can Buy?" on the basis of World Bank, *World Development Indicators*; data for 2019

Kalba International, Inc.
Digital Connectivity Advisors

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BDO is the brand name for the BDO network and for each of the BDO member firms.

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