



Norwegian  
Communications  
Authority

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Our ref.: 2300455-26 -  
Our date: 20.3.2024

Your ref.:  
Your date:

Contact: MMA, OAU

Exempt for public disclosure  
Offl § 13, jf FVL § 13 1. ledd nr 2

## Request for information pursuant to Article 5 (2) of Directive 2002/21/EC

The Norwegian Communications Authority (Nkom) refers to the EFTA Surveillance Authority's (the Authority) request for information dated 15 March 2024 regarding Nkom's notification of the draft decision of the wholesale market for access and call origination on public mobile telephone networks in Norway (former market 15).

In the following, Nkom will provide information and explanations on the questions raised by the Authority in its request.

1. **Differences between margin squeeze test for SPs and MVNOs.** ESA understands that there are two primary differences between the margin squeeze tests for MVNO access and for SP access.

First, the relevant margins are different. The SP access margin squeeze test uses gross margins, which only take into account the (mostly variable?) wholesale costs, without the relevant retail costs. The MVNO access margin squeeze test is based on full margins, which add to the gross margins the relevant retail costs.

Second, the level of aggregation of Telenor's retail products at which the test is carried out is different. The SP access margin squeeze test is carried out on a by product basis. This means that test is performed for each of Telenor's representative products. The MVNO access margin squeeze test, instead, is carried out at the "market" level. This means that the test will be performed on the aggregation (i.e. the average) of Telenor's representative products in the residential and business markets, respectively.

ESA understands that, as a consequence of the second difference, the sub-segmentation of Telenor's business product "Bedrift Total" into 7 segments is only relevant for the SP access margin squeeze test. The MVNO access test is carried out for the average of the representative business products as a whole.

Please confirm or correct ESA's understanding.

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Nkom's response:

Yes, ESA's understanding is correct.

- The SP access margin squeeze test uses gross margin. The wholesale costs are based on Telenor's standard reference offer which are mostly based on variable prices (price per minute, per SMS and MB).
- The level of aggregation is correctly described. But please note that the selection of relevant products is the same for both tests.
- The sub segmentation of Telenor's business product "Bedrift Total" is only relevant for the SP access margin squeeze test. The draft decision paragraph 473 - 474 also explains this.

2. **The assumed 3% market share in the SP access margin squeeze test.** If ESA's understanding regarding in question 1 is correct, then the assumption regarding the market share of a putative SP operator seems redundant. That is, if the margin squeeze test is performed for each of Telenor's representative product and it is based on wholesale costs (i.e. without retail costs), the 3% market share assumption for SP should not affect the results of the test. Please explain if our understanding is correct.

Nkom's response:

The assumed market share does affect the results of the gross margin squeeze tests for SP access. The SP access agreement includes a fixed monthly fee, an initial fixed fee and a discount. The discount is scale-dependent where the achieved discount depends on the total turnover. This means that the selected market share will affect the calculated wholesale cost per customer per product in the SP test and affect the margins calculated in the test.

However, the selected market share has a somewhat bigger impact on the results of the MVNO test due to the inclusion of retail costs.

3. **Fixed costs taken into account in the margin squeeze test.** As explained in question 1 (subject to confirmation), the margins used for the MVNO access margin squeeze test include the relevant retail costs, while the margins for the SP access margin squeeze test include only wholesale costs.

ESA understands that the main reason for this difference is to approximate the investments and associated running costs required to become an MVNO as opposed to an SP. That is, the investments required to build a proprietary core network.

ESA further understands, based on Annex 5, that the fixed costs component for the full margins are estimated by Analysis Mason. Analysis Mason approximate these costs based on a linear fit of Chilimobil's yearly fixed costs over the period 2018-2022 (derived from Chilimobil's public accounts). The estimated fixed costs amount to NOK 36.8 million.

As explained above, ESA understands that these costs will be used in the context of the MVNO access margin squeeze test, in order to approximate their running costs of building a core network. However, ESA understands that Chilimobil is not an MVNO, it is an SP. Therefore, its fixed costs (and estimation thereof) are unrelated to the investments required to become an MVNO.

Please explain the apparent inconsistency.

Nkom's response:

The reason for performing differentiated tests for MVNOs and SPs is to address that these types of providers are at different levels in the "ladder of investments", where an MVNO has done more infrastructure investments than a SP. In order to secure incentives for such

investments, the margin squeeze test for MVNO access should be more extensive than the test for SP wholesale access.

Efficient SPs also tends to target more limited parts of the residential or business market, than MVNOs which normally are targeted towards the overall residential or business market. The difference in efficiency standards, therefor also call for differentiated tests in order to reflect different business cases for MVNOs and SP. However, the full margin squeeze test for MVNOs does not aim at approximating the investments and associated running costs required to become an MVNO.

The fixed retail costs in the MVNO-tests are not an approximation of the MVNOs costs of building a core network. It is an estimation of the fixed costs an efficient operator with 3 % marked share would have in the retail operation. It includes costs as marketing, retail distribution, website, call center, management & administration, service platforms, depreciation and costs of capital.

Retail costs from Chilimobil are used in the estimation of such retail cost because they are one of few alternative operators with relevant figures available and with its own full retail operation (they do not rely on an MVNE like Telavox).

4. **Sensitivity of Analysis Mason fixed costs estimates.** Analysis Mason attempted multiple analyses to estimate the fixed costs, which led to very different results. This suggests that their analysis is not very robust.

First, Analysis Mason used a cross-section of costs from multiple operators, estimating the fixed costs to be approximately NOK [REDACTED]. Analysis Mason argues that the data underlying this analysis are unreliable because they do not take into account the CAPEX of the operator. ESA notes, however, that the CAPEX depreciation element in Chilimobil's fixed cost estimates is small, it amounts to 0.1%-6.5% over the period 2018-2022.

Then, it used a similar methodology as the one applied on Chilimobil's data, on Unifon's data. This analysis led to a fixed costs estimate of approximately NOK 49.9 million. ESA appreciates Analysis Mason's argument that Unifon is primarily serving business customers, and may have higher fixed costs, but notes that the estimate is significantly higher than the fixed costs estimated in the first analysis.

Moreover, the analysis on Chilimobil's data appears to be very sensitive to the data used. First, as Analysis Mason uses only data from 2018 to 2022, disregarding the data for 2015-2017. Second, by dropping only one data point for 2022, the estimates fixed costs decrease by approximately 26%, to NOK 27.2 million (from NOK 36.8 million of the original estimation). The figure below illustrates these points (comments in the figure were added by ESA).

Furthermore, the linear fit for the data of 2018-2022 is very poor, with an R2 of 14.3%. Whereas dropping 2022 significantly improves the R2 to 80%. ESA acknowledges, however, that the R2 is likely severely impacted by the very few data points used in the analysis, which make it not very reliable.

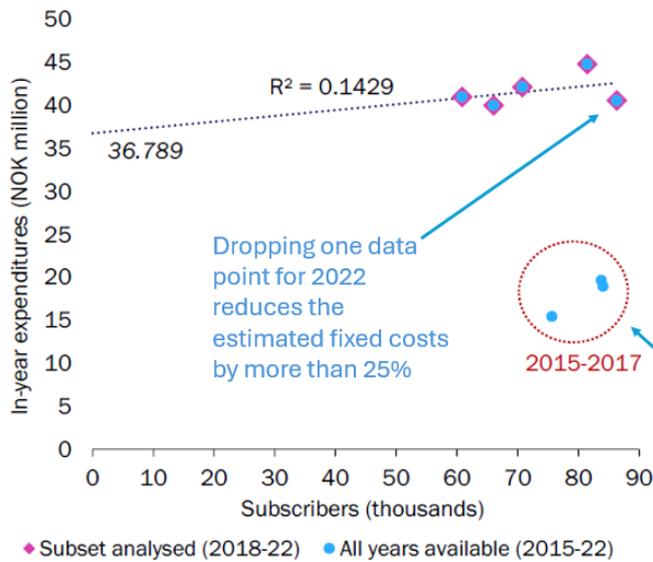


Figure A.3: Scatter plot of subscribers and expenditures for Chilimobil, with regression analysis for 2018–2021 shown [Source: Analysys Mason analysis of data from the Proff website, 2024]

Note: Comments in the figure added by ESA.

Please comment on whether and how Nkom took the uncertainties of the analysis into account.

Nkom response:

ESA may not appreciate that the retail input assumptions required for the margin squeeze test are effectively impossible to derive from actual operator data.

The specific retail fixed cost inputs required by the margin squeeze test are equivalent to the efficient fixed costs incurred by a hypothetical operator (the adjusted equally efficient operator, or ‘A-EEO’) that intended to (i) offer Telenor’s broad portfolio of residential and business mobile subscriber products to customers in Norway and (ii) serve 3% of all mobile subscribers in Norway.<sup>1</sup>

There is not a real operator that can be identified that has exactly the characteristics of the A-EEO in Norway. Therefore, some approximations and logical assumptions are necessary.

From the perspective of Nkom’s objectives for the test itself, determining reasonable retail cost assumptions is a balancing act. Nkom seeks to ensure that the wholesale mobile market has sufficient economic space to incentivize wholesale operators to compete with the larger operators for customers, but not so much economic space so that wholesale operators will not compete very hard and settle for a healthy profit on a small and static subscriber base. The lower the retail cost assumptions that are used, the less economic space there will be.

There is no constructive analysis of operator data that could actually determine values for the hypothetical A-EEO from first principles. What the approach used has done is to investigate a range of data sources to understand the range of possible fixed costs.

<sup>1</sup> We note that there is also an incremental retail (variable) cost per subscriber equivalent to the amount spent on average across its user base (those variable retail costs covering average variable commissions, variable marketing, variable billing, etc.). This is estimated using Telenor’s retail cost information and is not the focus here. The focus is instead on the retail fixed costs.

In terms of the actual operator data available, actual small-scale operators active in one segment do not offer such a wide portfolio of products as Telenor and therefore any fixed costs derived are likely to be underestimated compared to the definition of the A-EEO. There are not currently any alternative providers (SPs and MVNOs) in Norway with 3% market share (they are either less than 2% or more than 10%).

Moreover, small-scale operators are usually unable to separate out the costs for their mobile services operation from the rest of their business (if they have one, such as fixed telephony or fixed broadband). Other small-scale operators might also offer services to multiple segments. In this case, it is not feasible to isolate the retail fixed costs applicable to only one segment that are required by the model.

The approach taken was to request data from as many alternative providers as possible to understand the range of results that could be derived. A data request was issued to alternative providers with a single common format for cost data from all parties. Four providers responded,<sup>2</sup> each giving data for one or two years, but the data varied in completeness, granularity and format.

There were ultimately three different sets of data and three different methodologies considered. The methodologies used by Analysys Mason ([2] and [3]) had to be different given the different format of the data concerned.

[1] Telenor's proposal (based on information for just the year 2019 for Happybytes and their own assumptions) indicated a fixed cost of NOK [REDACTED]. Happybytes is an online-only operator, so in our view could not effectively target the entire Norwegian residential market segment.

[2] Analysis of all the categorized cost data submitted by the alternative providers (excluding Telenor). This indicated a fixed cost of NOK [REDACTED].

[3] Separate analysis of the high-level cost data published on proff.no over several financial years for each of 3 operators (Unifon, Happybytes and Chilimobil):

- The data for Unifon (2015–2022, with prior years excluded given the limits of Nkom's Ekomstatistikk subscriber data) indicated a fixed cost of NOK 50 million for the business segment, but the operator operates across multiple other segments in the fixed and mobile markets
- The data for Happybytes (2018–2022, with all available years considered) indicated a fixed cost of NOK 6 million. This output was not given any weight given the business model of Happybytes, as described above.
- The data for Chilimobil (2018–2022, with prior years excluded given that Chilimobil both changed its strategy from prepaid-focused to postpaid-focused and changed its host network) indicated a fixed cost of NOK 37 million.

The key points about Chilimobil are:

- the output value was within the range of the other values [REDACTED]
- is the operator that we consider is closest to the definition of the A-EEO residential segment (in terms of mix of residential prepaid and residential postpaid subscribers from 2018 onwards)
- the output value is consistent with the analysis of Chilimobil previously undertaken in 2019 (when adjusting for inflation).

<sup>2</sup>

*Telenor were the fifth respondent, but they answered a separate data request as the SMP operator.*



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Therefore, balancing the objectives of the exercise, Nkom and Analysys Mason considered it a reasonable conclusion to effectively take the 2019 values adjusted for inflation.

Please feel free to contact us if you have any further questions or need for clarification.

With regards

Kamilla Sharma  
Director

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Head of Section

*Electronically approved. No signature required*

Markedet for tilgang til og samtaleoriginering i mobilnett (15.5) EFTA Surveillance Authority