

Reason for investigating telecom

New production system for the Dutch price statistics (CPI, HICP, PPI, SPPI)

- Explicitly designed to handle diverse data sources in a streamlined manner

Major technological developments in the Telecom industry

- SMS -> MMS -> RCS
- 2G -> 3G -> 4G -> 5G -> 6G
- DSL and COAX -> Fiber-optic



Various services included in the J61

Wired: TV/Internet/Telephony

Wireless: Calling/Messages/Data

Additional services:

- Hardware
- Email
- Hosting
- Call management
- Voicemail
- Streaming
- Security
- Back-up
- Private connection



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Focus on services where the emphasis is on the transmission of information instead of the information itself



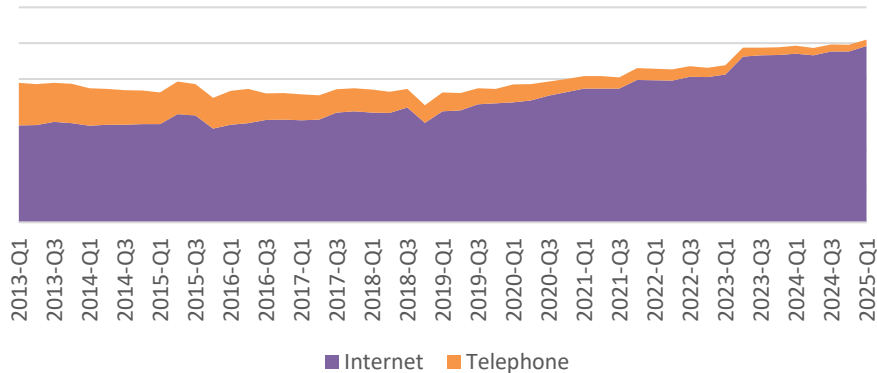
61.1: Wired

Traffic volumes have increased 6x times

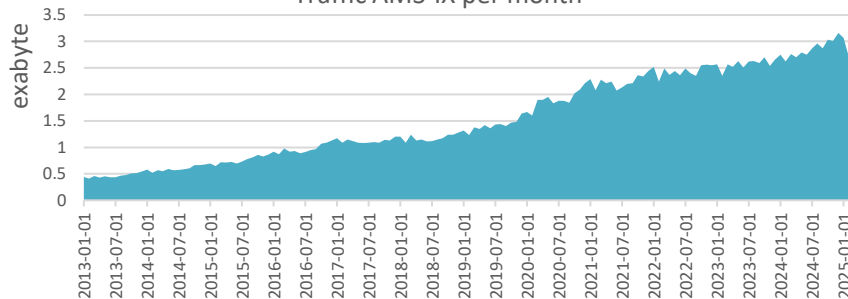
Bandwidth has increased 10x time

Revenue has only marginal increased

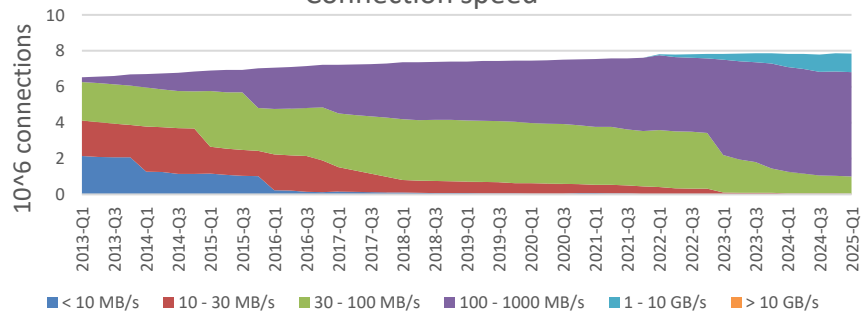
Revenue



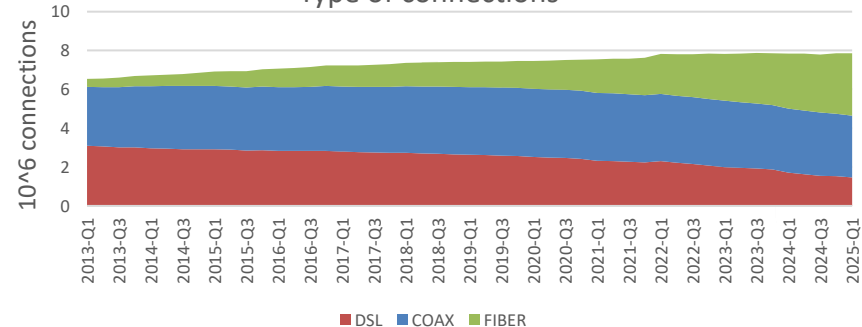
Traffic AMS-IX per month



Connection speed



Type of connections

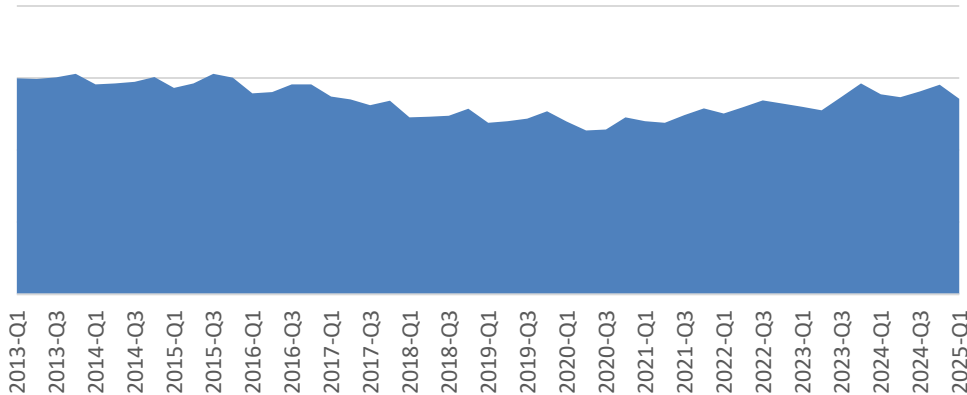


61.2: Wireless

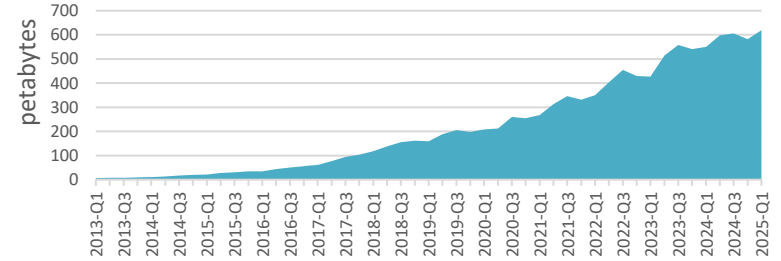
Mobile data usage has increased 50x times

Mobile revenue has remained stable

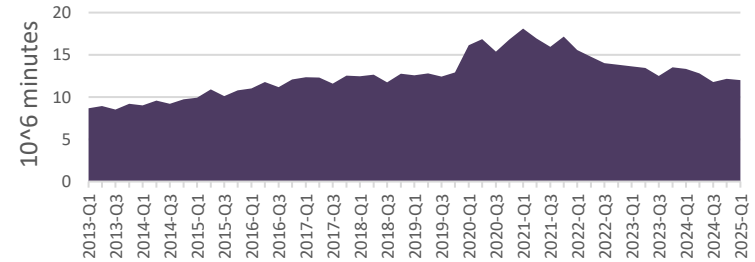
Revenue



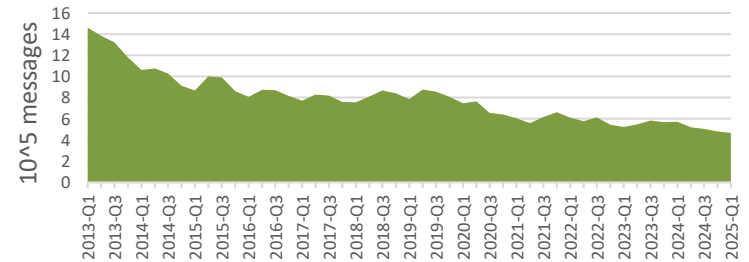
Data



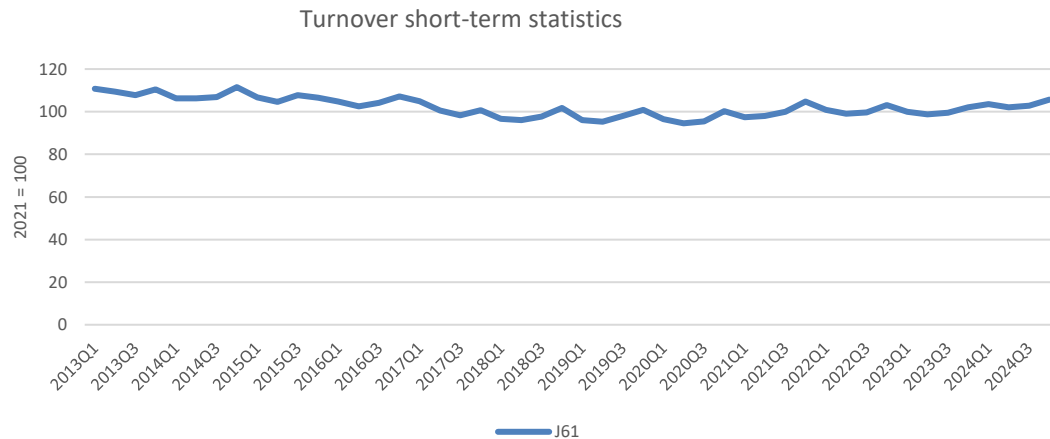
Voice



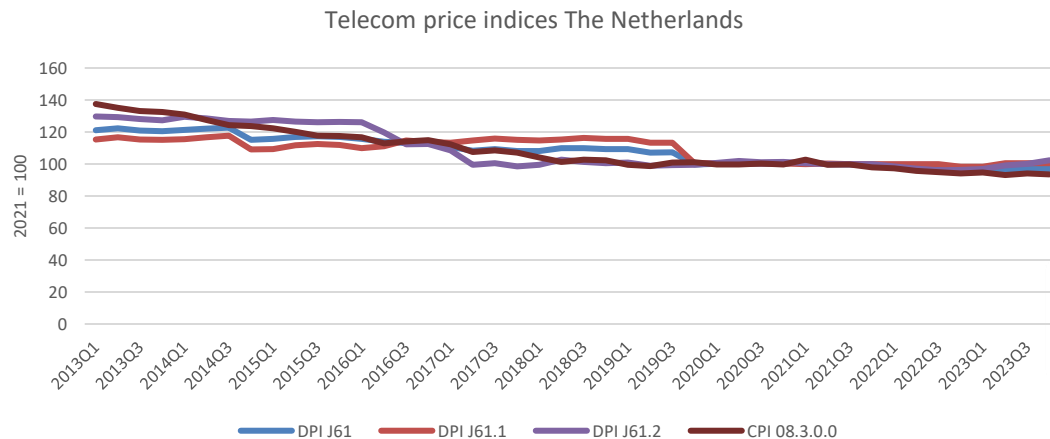
SMS



Turnover STS



SPPI and CPI



Current SPPI

Incomplete panel

- One of the largest providers is missing
- No sub-providers in the panel

Blind spot in telecom for large enterprises

Either products, baskets or a combination of both

- Small amount of observations
- Substitution problems

Substitution

Between different models/plans

- Prepaid
- Postpaid
- Fixed bundle plans
- Unlimited plans

Between different forms

- Text
- Voice
- Data

Between fixed line and mobile



Substitution

Between different models/plans

- Prepaid
- Postpaid
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Between different forms

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Between fixed line and mobile

How Unlimited will you go? Check out our [blog](#) about the options available with an Unlimited subscription.

Unlimited50	Unlimited400	SuperUnlimited	SuperUnlimited+
Up to 50 Mbit/s	Up to 400 Mbit/s	Up to 600 Mbit/s	Up to 1000 Mbit/s
20GB per day	20GB per day	20GB per day	20GB per day
40GB per month in the EU	50GB per month in the EU	75GB per month in the EU	100GB per month in the EU*
Share up to 40GB monthly	Share up to 50GB monthly	Share up to 75GB monthly	Share up to 100GB monthly

*With SuperUnlimited+, you also get 25GB in the US, Canada, Turkey, Morocco, the Caribbean, and Suriname. Actual available speeds may vary from those advertised due to network coverage and congestion. Wondering if your phone can handle 1000 Mbps? Check our [coverage map](#).



Substitution

Between different models

- Prepaid
- Postpaid
- Fixed bundle plans
- Unlimited plans

Between different forms

- Text
- Voice
- Data

Between fixed line and mobile

SMS

MMS RCS

RTT



Substitution

Between different models

- Prepaid
- Postpaid
- Fixed bundle plans
- Unlimited plans

Between different forms

- Text
- Voice
- Data

Between fixed line and mobile



Data usage approach

Originally proposed by ONS

All forms of telecom services are converted into one unit

1 SMS = 280 bytes

1 Min = 480 kilobytes

$$\frac{\text{Total revenue}}{\text{Total volume in (tera)bytes}} = \text{Price}$$



Data usage approach

8 GB data
+
Unlimited
voice and text

16 GB data
+
Unlimited
voice and text

Unlimited data
+
Unlimited
voice and text

Maximum data

$$\frac{\text{Price}}{8}$$

$$\frac{\text{Price}}{16}$$

$$\frac{\text{Price}}{\infty}$$



Data usage approach

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Maximum data

$$\frac{\text{Price}}{8}$$

$$\frac{\text{Price}}{16}$$

$$\frac{\text{Price}}{\infty}$$

Used data

$$\frac{\text{Price}}{7}$$

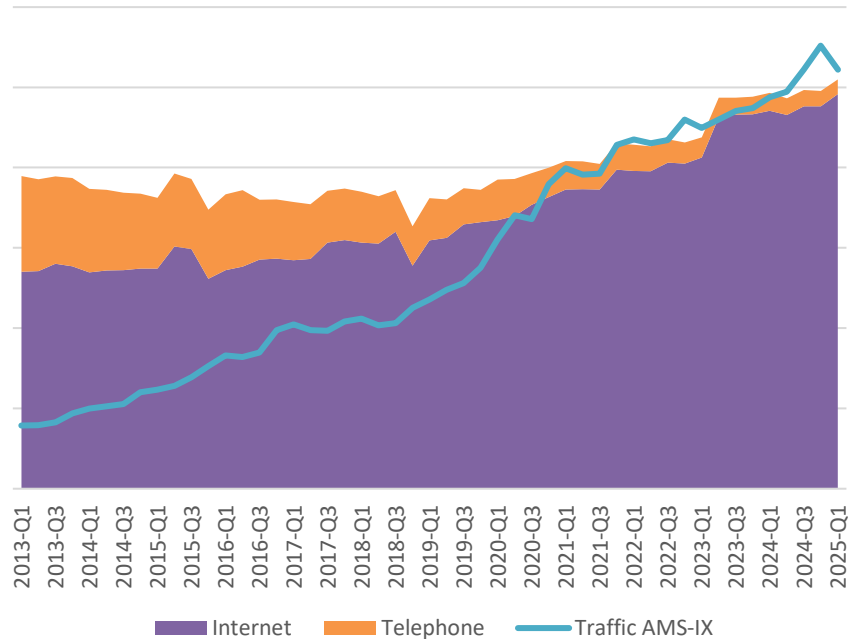
$$\frac{\text{Price}}{12}$$

$$\frac{\text{Price}}{23}$$

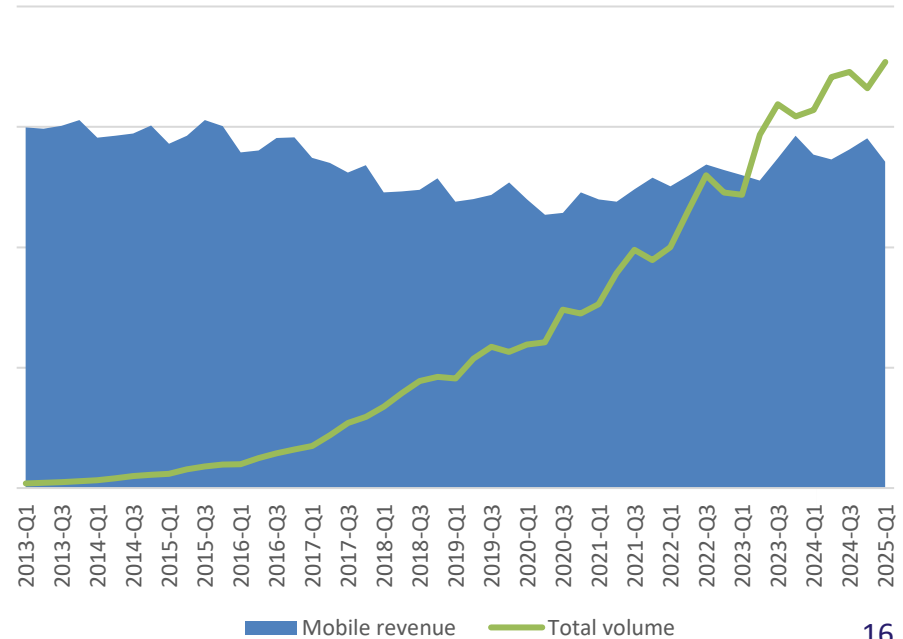


Revenue and volume

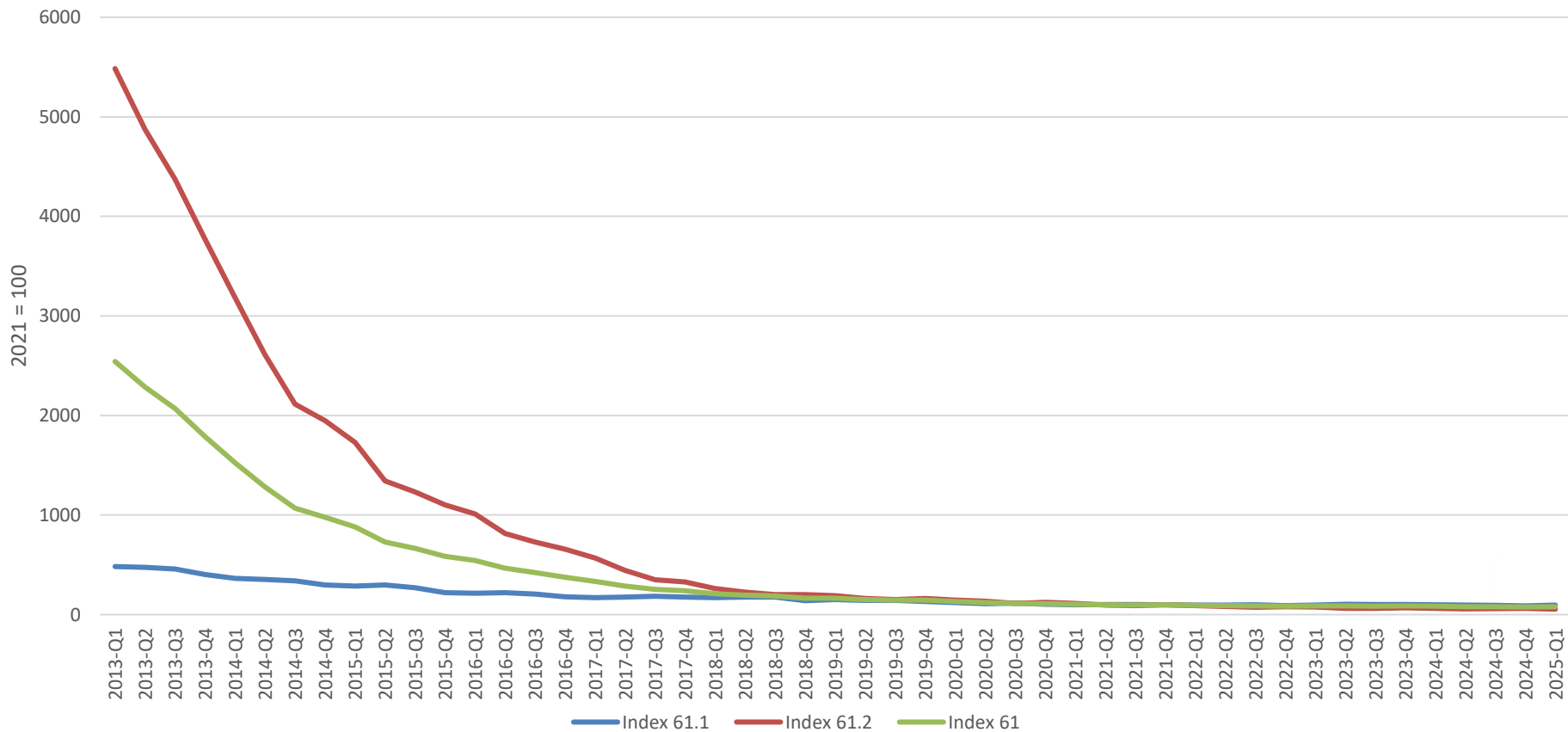
61.1: Wired



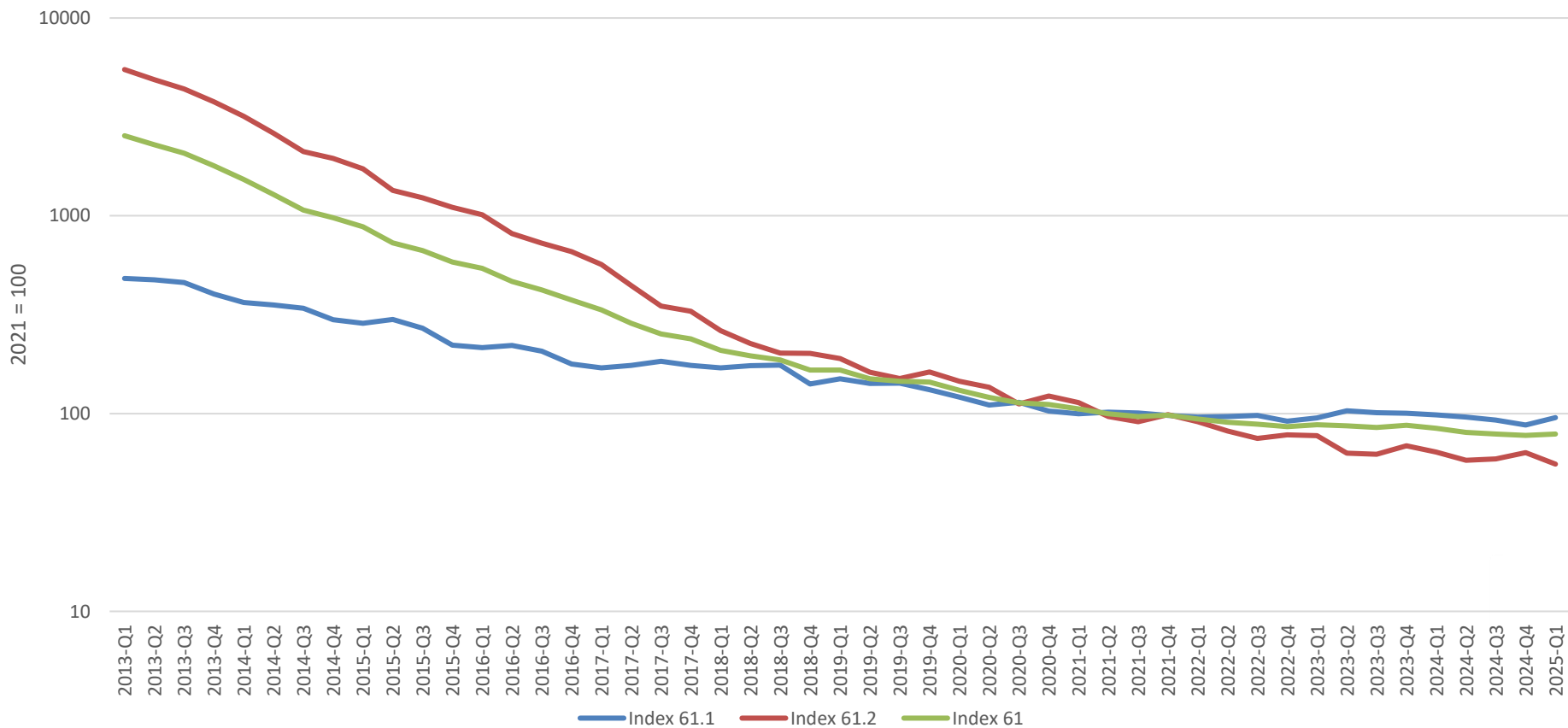
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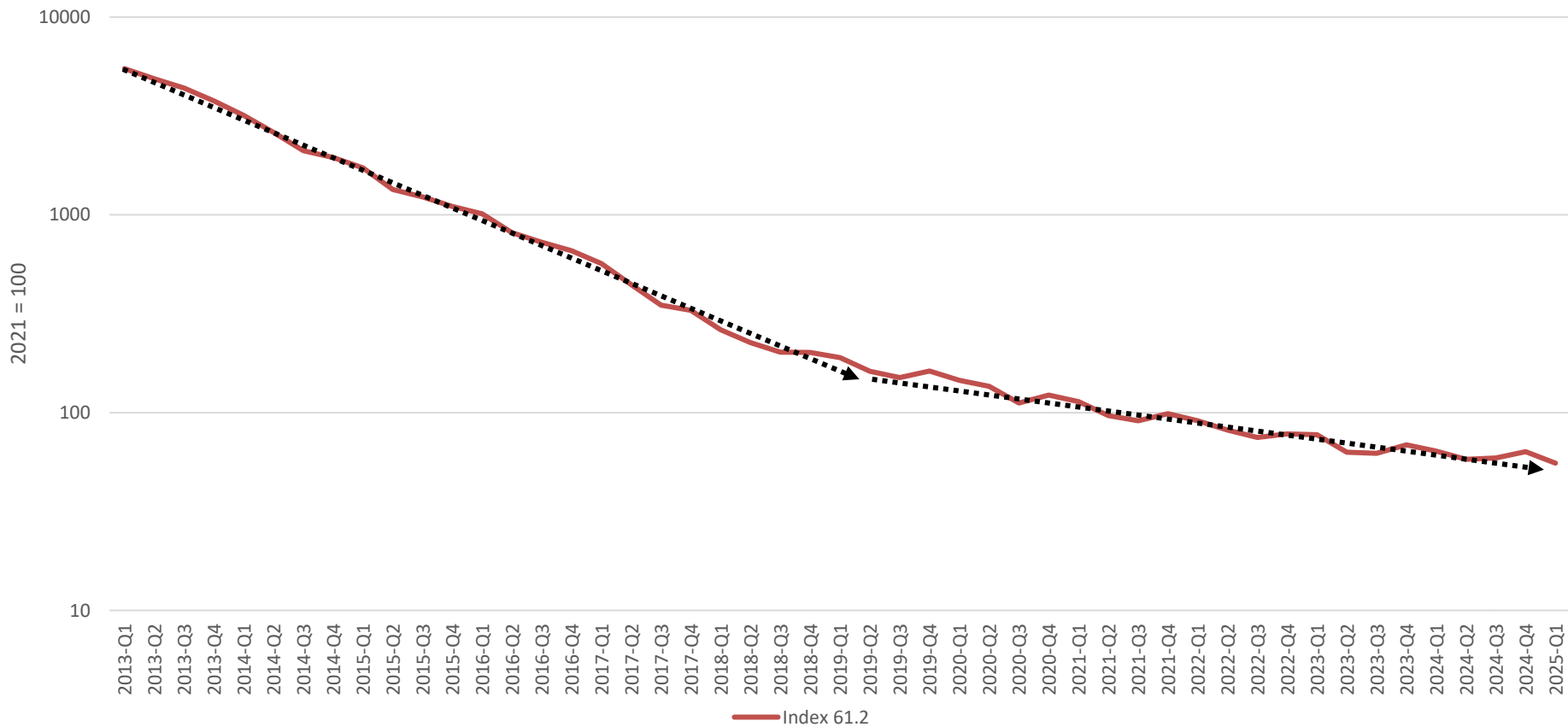
New Telecom index for The Netherlands



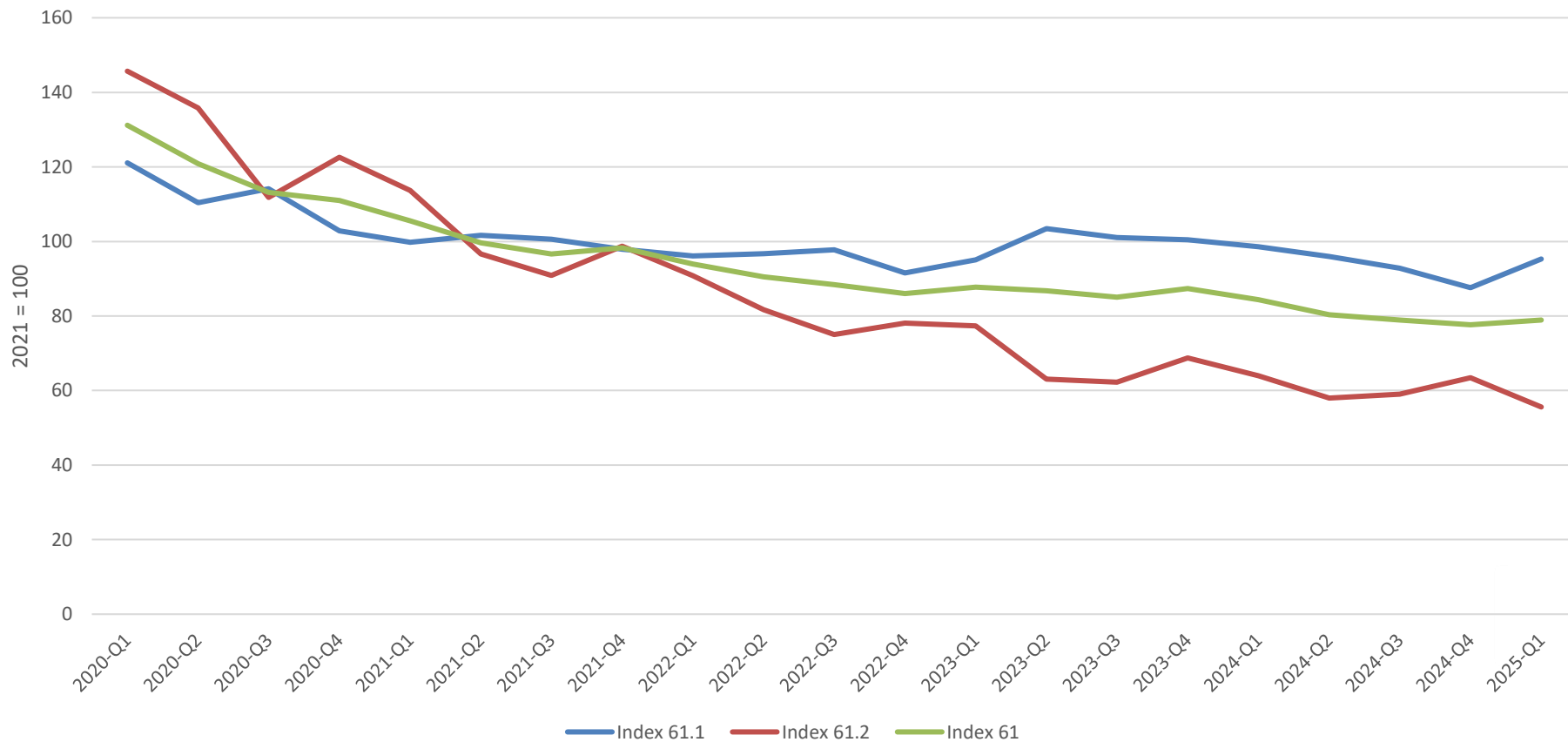
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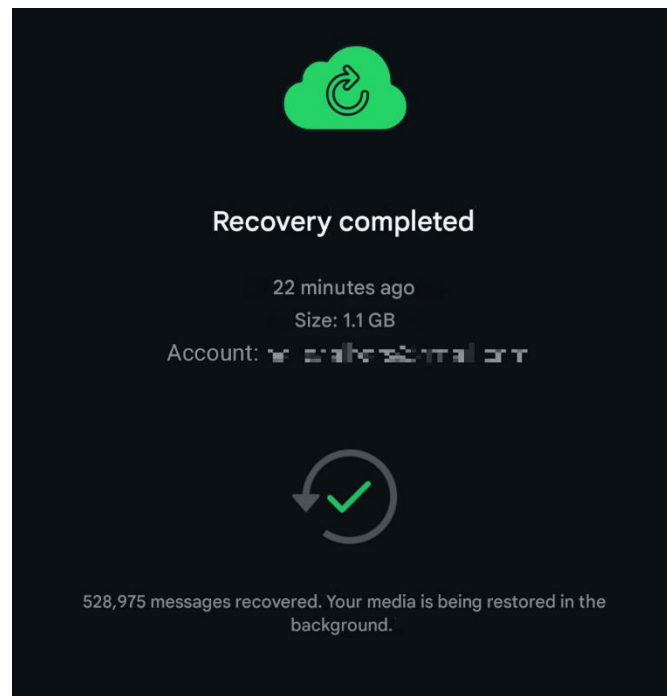


Volume growth

Have customers truly experienced these price and volume developments?

Yes!

Where in the past a handful of text messages were sent, we now send tens of thousands to hundreds of thousands of messages per year



Size: 1.1 GB

528,975 messages



Follow up

What is the cause of the reduced development of the 61.2 index in 2019?

How do we want to perceive the price of services that cannot be expressed in data?

Internal discussions with CPI and National Accounts.

Calculation of potential adjustment of economic growth.

What about the rest of section J?