



# **Mobile Network Usage in Viet Nam, Thailand, Malaysia, and the Philippines**

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# Objectives of the research

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- 1** Analyze the status of internet adoption and mobile subscription rates in Malaysia, Vietnam, Thailand, and the Philippines.
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- 3** Assess the current status of 5G deployment to find gaps and opportunities to be targeted by investment in the region for improving infrastructure in mobile technology.

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- 2** Assess affordability and access challenges: Discuss the challenges that deal with access to the internet; pay particular attention to the aspect of affordability.
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- 4** Analyze how the ownership of mobile phones relates to internet use, drawing implications for digital literacy, access to content, and engagement in the digital economy.

# Key findings

## Digital growth and Internet usage

Internet usage in Malaysia, Vietnam, Thailand, and the Philippines has continued to increase from 2014 to 2023, with four countries all having more than 75% of their populations online in 2023. This rate outpaces the global average of 67% and the Asia-Pacific region's 66%. Malaysia leads with an impressive 98% of its population using the internet.

## High mobile subscriptions

All four countries have more than 100 mobile-cellular subscriptions per 100 people. This is because people use multiple SIM cards, reflecting their high rate of consumption of the service. In effect, Thailand has the highest penetration rate to indicate a strong mobile communication culture. In fixed-telephone subscriptions, Malaysia leads, but Vietnam has better fixed-broadband subscriptions due to a relatively low fixed-broadband basket price at 2.34% of GNI per capita. Malaysia and Thailand also lead with respect to subscriptions for mobile broadband, further underpinning their advanced mobile infrastructure.

Data source: [ITU](#)

## Inadequate affordability

Despite progress, affordability remains a significant barrier to internet access in the Philippines, where the prices of mobile broadband are much higher when compared with those of the neighboring countries. This gap in affordability prohibits the efficient growth of mobile and fixed subscriptions to broadband.

## 5G coverage

Thailand leads in 5G coverage, reaching 89%, followed by Malaysia at 80% and the Philippines at 69%. Comparatively, Vietnam is still in the trial phase of 5G, reflecting the need for further investment to enhance mobile technology.

# Individuals using the Internet

It shows that Malaysia, Vietnam, Thailand, and the Philippines have an upward graph concerning internet usage among their population from the year 2014 to 2023, indicating further development in digitalization and improvements in infrastructure and accessibility within these Southeast Asian nations.

With a rate that was always quite high, Malaysia was leading the pack in the diffusion of the internet. Starting with above 60% of the population online in 2014, Malaysia rapidly reached 80% coverage by 2016 and steadily went on to grow beyond 95% in 2021, a level it retained until 2023.

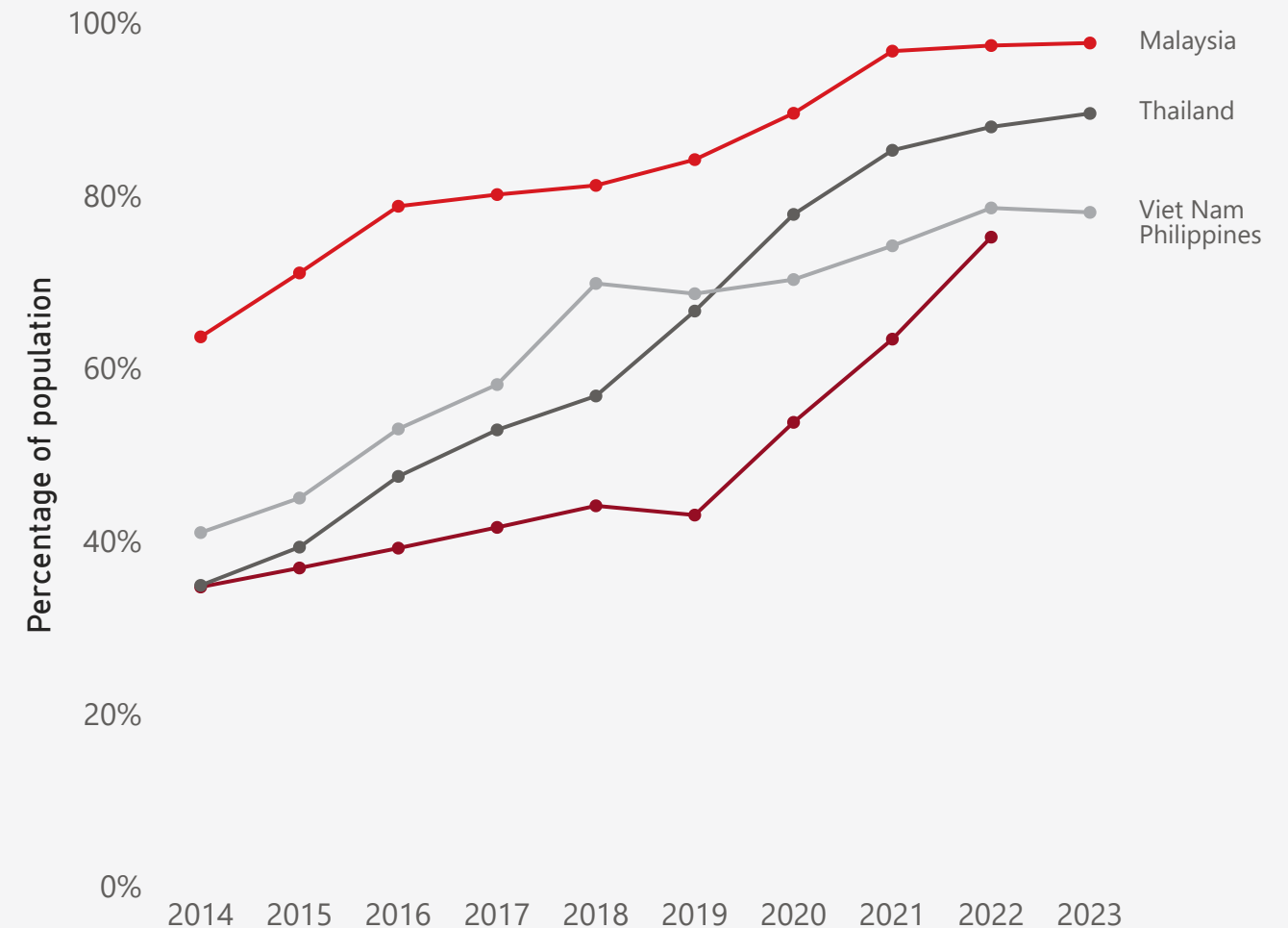
The growth pattern of Vietnam and Thailand is similar. Both nations started with around 35-40% internet adaption in the year 2014 and grew gradually to about 65% in 2019. Later, Thailand outgrew Vietnam and reached almost 90% in the year 2023, while the latter kept the percentage slightly less than 80%.

While starting off at par with Thailand, the Philippines grew slower. In 2019, it reached only 43% internet adoption and then saw a significant uptick to 75% by 2022, bringing it close to Vietnam's internet adoption rate. Unfortunately, data for 2023 in the Philippines is unavailable.

These gaps in Internet adoption can be explained by the wide inequality of performance in the enablers of mobile connectivity: mobile Internet network coverage, affordability of mobile devices and services, awareness and digital skills of citizens, and secure online relevant content available to the population.

Data source: [ITU](#)

Individuals using the Internet

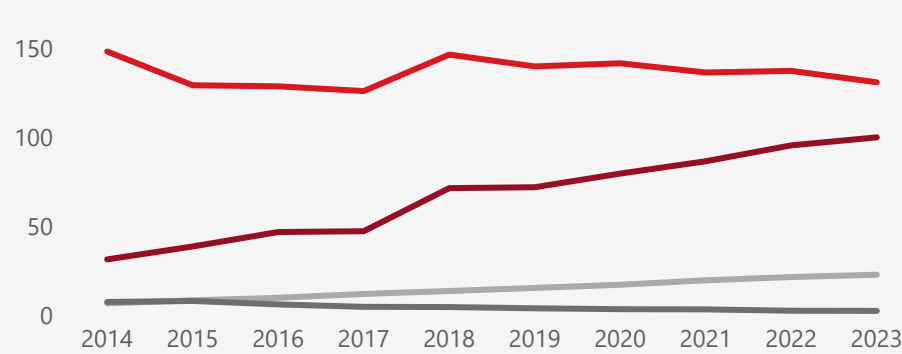


# Subscriptions

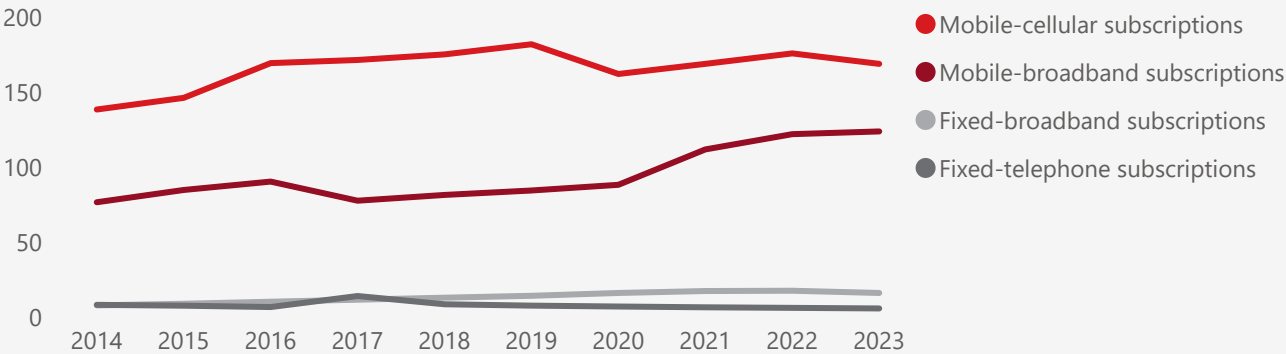
The fact that in all 4 countries, between 2014 and 2023, the subscription rate for mobile-cellular telephone is above 100 per 100 inhabitants could point to relatively widespread use, suggesting that one individual own multiple SIM cards or devices. In recent years, mobile-broadband adoption has surged, particularly in Malaysia and Thailand, exceeding 100 per 100 inhabitants since 2017 and 2021, respectively. While fixed-broadband subscriptions have continued to increase steadily in all four countries, fixed-telephone services continue to decrease in both Vietnam and Thailand, reflecting the shift in subscribers to mobile communication. In the Philippines and Malaysia, fixed-telephone subscriptions have posted a very slight and gradual growth.

Subscriptions per 100 inhabitants by countries

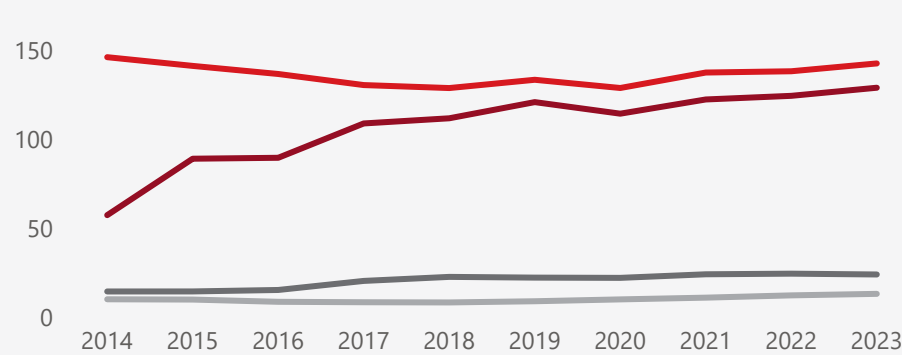
Viet Nam



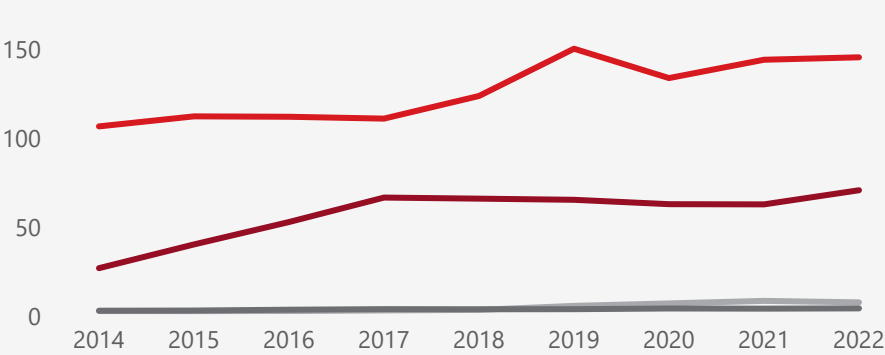
Thailand



Malaysia



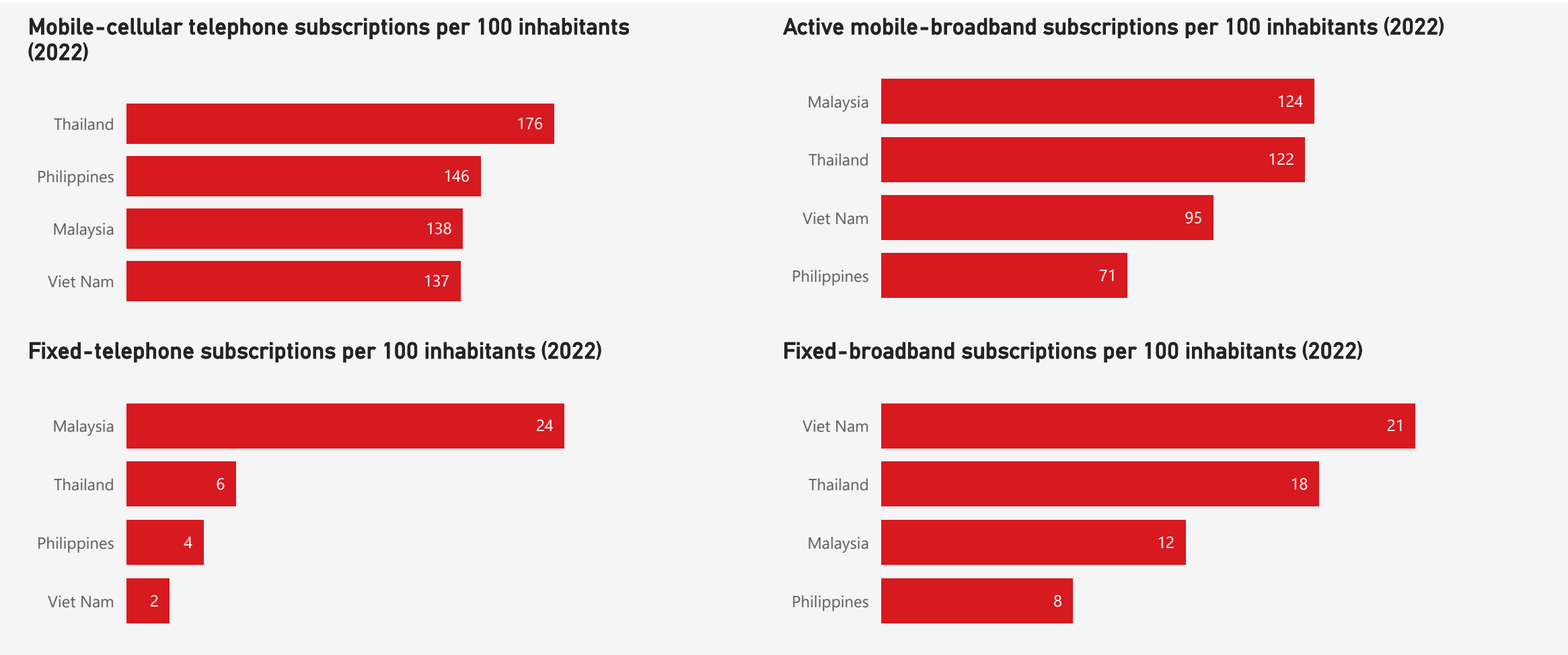
The Philippines



# Subscriptions

The number of mobile-cellular subscriptions now outstrips the population, with Thailand's penetration rate at 176 subscriptions per 100 people, more than about 1.2 times that of the Philippines, Malaysia, and Vietnam. Both Malaysia and Thailand boast of over 120 mobile-broadband subscriptions per 100 people, 1.3 times the rate in Vietnam and 1.7 times that of the Philippines.

Fixed-telephone subscription rates are much lower compared to mobile subscriptions, as fixed connections are often shared by multiple people within a household. Vietnam leads in fixed-broadband penetration, with 21 per 100 inhabitants, nearly 2 times the penetration rate of Malaysia (12 per 100 inhabitants) and 3 times that of the Philippines (8 per 100 inhabitants). Fixed-telephone subscriptions stand below 7 per 100 people in these countries, with the notable exception of Malaysia, at approximately 25 subscribers per 100 inhabitants.



# Affordability of ICT services

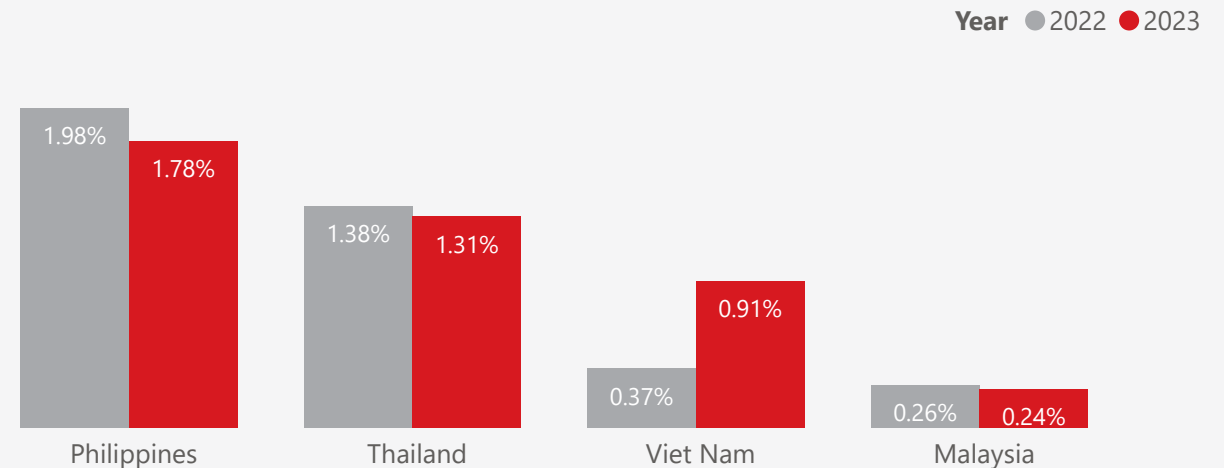
The increased affordability of fixed and mobile-broadband services continued in 2023, with the exception of Vietnam, which saw the price of mobile broadband almost triple in 2023 compared to 2022, though this still remains below 1% of GNI per capita.

Affordability, however, remains a major barrier to internet access, especially in lower-middle-income countries like the Philippines. A significant affordability gap exists between the Philippines and the other three countries. In the Philippines, mobile-broadband is about twice as expensive compared to Vietnam (which also belongs to the lower-middle-income group of countries) and about 7.5 times less affordable than Malaysia, which belongs to the upper-middle-income group of countries. Also, fixed-broadband in the Philippines costs about 10% of the average monthly income, which makes it 4 times less affordable compared to Malaysia and Vietnam and 3 times less affordable compared to Thailand.

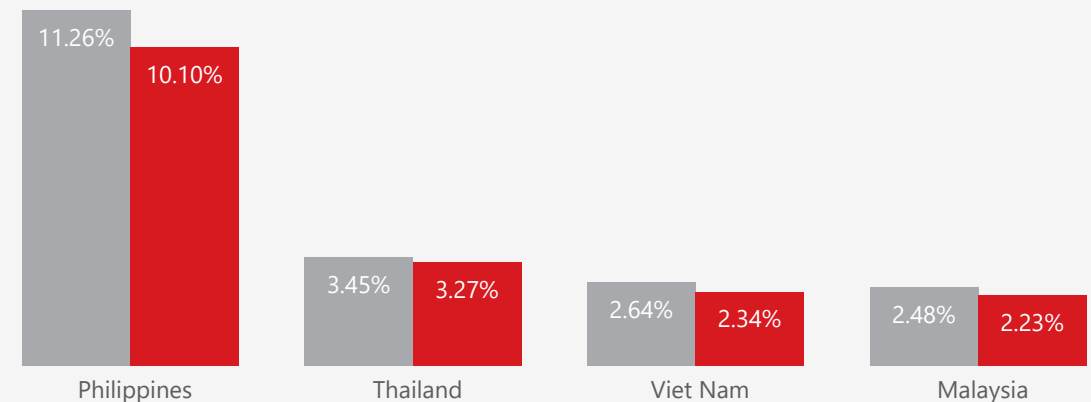
Affordability is likely a key reason why the Philippines lags behind the other three countries in both mobile-and fixed-broadband subscriptions. In contrast, much lower cost of fixed-broadband in Vietnam at 2.64% of GNI per capita explains why it leads fixed-broadband subscriptions per 100 inhabitants among the four countries in 2022.

The United Nations Broadband Commission for Sustainable Development has the goal of making broadband affordable in developing countries by 2025, defining affordability as access costing less than 2% of monthly GNI per capita. In 2023, this affordability target for the data-only mobile-broadband basket was met by these 4 countries. However, based on fixed-broadband, these four countries still remain above the affordability target.

Data-only mobile-broadband (2GB) basket prices as a percentage of gross national income (GNI) per capita



Fixed-broadband (5GB) basket prices as a percentage of gross national income (GNI) per capita

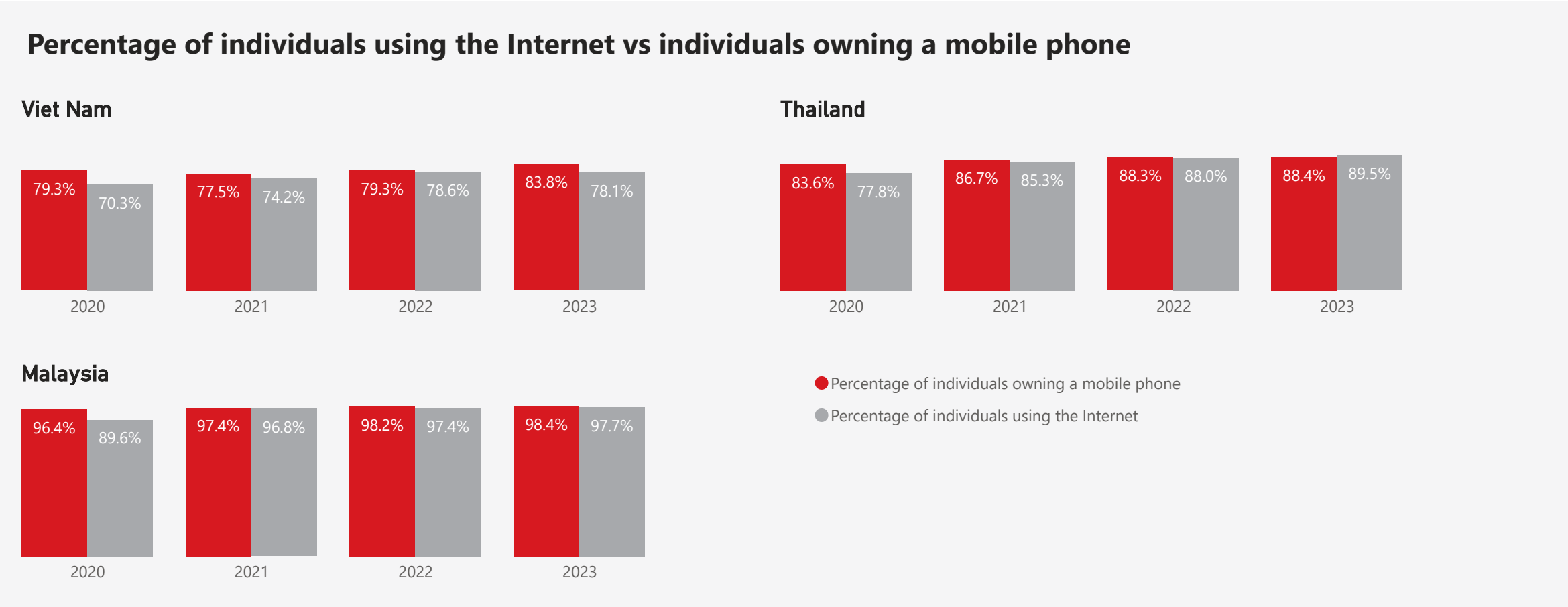




# Mobile phone ownership

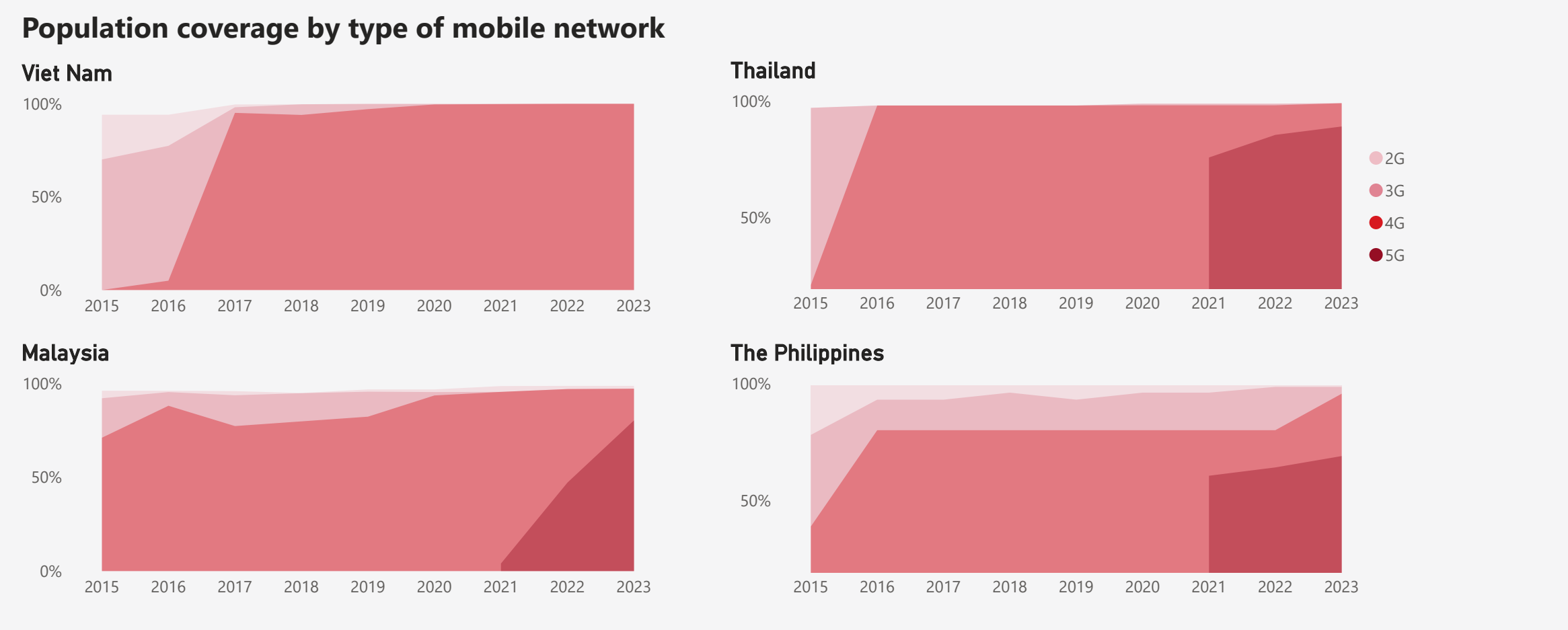
In 2020, data shows that, the percentage of people owning a mobile phone is higher than the percentage of Internet users in Vietnam, Thailand, and Malaysia. Data for the Philippines is unavailable. However, the gap between mobile ownership and Internet use has been narrowing in these three countries as Internet usage has grown significantly faster than mobile phone ownership over the past three years.

Specifically, in 2023, Malaysia saw nearly equal rates of Internet use and mobile phone ownership, with 98.4% of the population owning a mobile phone, just under 1 percentage point higher than the proportion of Internet users. In Thailand, Internet penetration exceeded mobile phone ownership by more than 1 percentage point. In Vietnam, the gap is slightly wider, with Internet penetration at 78%, while mobile phone ownership is about 6 percentage points higher.



# Mobile network coverage

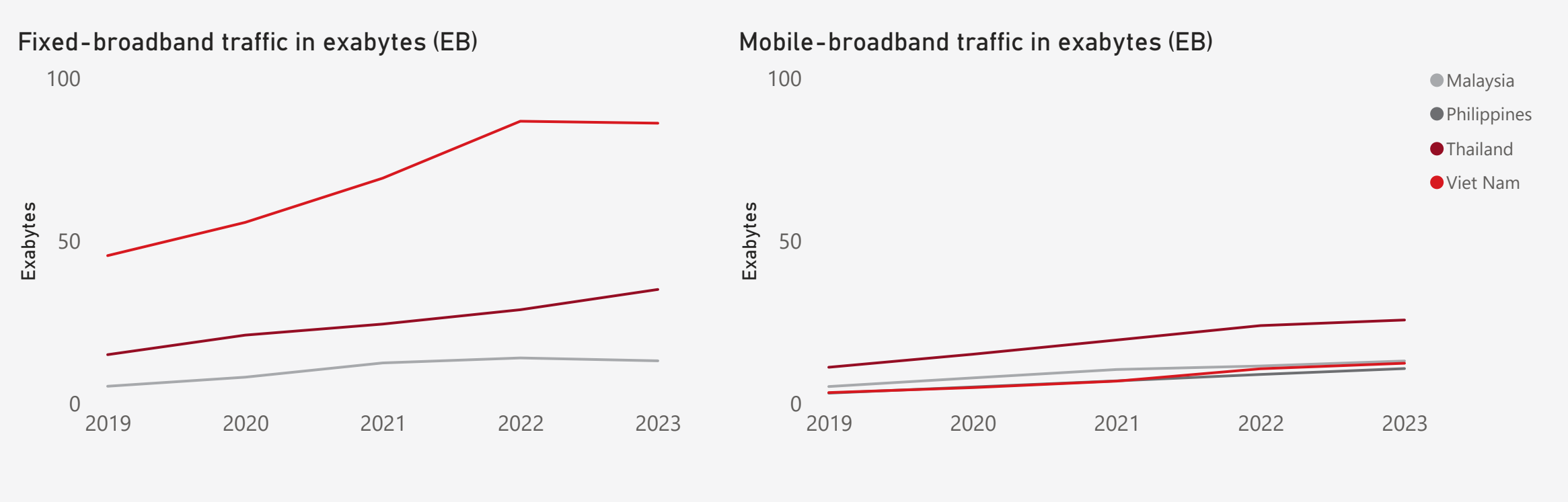
Since the commercial roll-out of 5G in 2019, global coverage rose to 40% of the population at the end of 2023. However, the distribution of 5G remains imbalanced across regions. Among these four countries, 5G was deployed to Thailand, Malaysia, and the Philippines since 2021. In 2023, Thailand is leading the pack with a population covered at 89%, followed by Malaysia with 80%, and the Philippines at 69%. In contrast, Vietnam remains behind in implementing 5G technology, as it is currently still in the trial phase. Despite this gap, 4G networks cover more than 95% of the population in these countries, providing a reliable option in areas where 5G is currently unavailable. This ubiquitous 4G access emphasizes the significance of maintaining connection and digital inclusivity in the region, even while efforts to extend 5G infrastructure continue.



# Internet traffic

Fixed-broadband traffic has increased rapidly in Vietnam in recent years, far beyond that of Malaysia and Thailand. In 2023, fixed-broadband traffic in Vietnam reached 86 exabytes, 2.5 times higher than Thailand and 6.5 times greater than Malaysia. Thailand has also witnessed steady growth, from roughly 15 exabytes in 2019 to 35 exabytes by 2023. Malaysia registers the lowest fixed-broadband traffic out of the three countries, as growth rises slower than its neighbors, from 5.5 exabytes in 2019 to just 13 exabytes in 2023. Data for the Philippines is unavailable. The overall trend in these countries is a constant upward tendency in the use of fixed-broadband; this might be because of increased demand for internet services, digitalization, and reliance on online platforms. The extreme growth for Vietnam suggests significant increases in broadband infrastructure or user base.

In Thailand, the mobile broadband traffic has increasingly gone upwards for the last years, much higher compared to three other countries. In 2023, Thailand's mobile broadband traffic hit 25.8 exabytes, more than 2.5 times higher than that of each of the other three nations. Malaysia started at 5.3 exabytes, well ahead of starting traffic in the Philippines and Vietnam, but grew more slowly than both. This gap began to close in 2022 as all three nations have finally reached between 10 to 13 exabytes in traffic.



**Thank you!**