Asia Pacific 5G Revenues, 2019 – 2029: How much and where will mobile consumers spend?

Market Study First Quarter, 2020





## Asia Pacific 5G Revenues, 2019 – 2029: How much and where will mobile consumers spend?

## A Market Study

Published First Quarter, 2020 Version 1.0

Report Number: 1Q2020-06

*iG*R 12400 W. Hwy 71 Suite 350 PMB 341 Austin TX 78738

## **Table of Contents**

Abstract	1
Executive Summary	3
Asia Pacific 5G Revenue Model	3
5G Mobile Service	3
5G IoT	4
5G Fixed Wireless Access	4
5G Advertising	5
5G Entertainment	5
5G Gaming	6
Total Revenue	6
Table A-1: Total Annual 5G Revenue (\$M), 2019-2024	6
Table A-2: Total Annual 5G Revenue (\$M), 2025-2029	6
Figure A: Total Annual 5G Revenue (\$M), 2019-2029	7
What This Means	7
Methodology	Q
Terminology	
Connections and Subscribers	
What is 5G?	10
5G Use Cases	10
Figure 1: 5G fundamental capabilities	10
URLLC	11
Massive IoT	12
5G Services and Use Cases	
Figure 2: 5G main applications and services	
Challenges Along the Road to 5G	14
What do the first 5G networks look like?	15
Current status of 3GPP 5G standards	16
Figure 3: Timeline of 3GPP Releases	
_	
Asia Pacific Mobile Operators' 5G Initiatives	
Australia	
Spectrum	
Optus	
Telstra	
China	
Spectrum	
China Mobile, China Telecom and China Unicom	
India	
Spectrum	
Bharti Airtel	18

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Reliance Jio	18
Vodafone Idea	18
Indonesia	18
Spectrum	18
Telkomsel	18
XL Axiata	18
Indosat Ooredoo	18
Japan	18
Spectrum	18
KDDI	19
NTT DoCoMo	19
Rakuten	19
Softbank	
Philippines	19
Globe	
PLDT (Smart Communications)	19
Singapore	19
Spectrum and Operator Plans	19
South Korea	20
Spectrum	20
KT	
LG U+	
SK Telecom	20
Taiwan	20
Spectrum and Operator Plans	20
5G Revenue Sources	21
Figure 4: Revenue Sources in the 5G Ecosystem	
5G Mobile Service	
5G loT	
5G Fixed Wireless Access	
5G Advertising	
5G Entertainment	
5G Gaming	
Network slicing	
5G Revenue Model Assumptions	
Overall Assumptions	
Mobile Service Revenue Assumptions	
IoT Revenue Assumptions	
Fixed Wireless Revenue Assumptions	
Advertising Revenue Assumptions	
Entertainment Revenue Assumptions	
Gaming Revenue Assumptions	29
Asia Pacific 5G Revenue Model	30
5G Connections and Subscribers	30

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Table 1: Asia Pacific 5G Connections and Subscribers (000), 2019-2024	30
Table 2: Asia Pacific 5G Connections and Subscribers (000), 2025-2029	30
Figure 5: Asia Pacific 5G Connections and Subscribers, 2019-2029	31
Revenue from 5G Mobile Broadband Services	31
Table 3: Blended ARPU and Revenue(\$M) from 5G Mobile Services, 2019-2024	32
Table 4: Blended ARPU and Revenue(\$M) from 5G Mobile Services, 2025-2029	32
Figure 6: Revenue (\$M) from 5G Mobile Services, 2019-2029	32
Revenue from 5G IoT	33
Table 5: 5G IoT Connections, 2019-2024	33
Table 6: 5G IoT Connections, 2025-2029	33
Figure 7: 5G IoT Connections, 2019-2029	33
Table 7: ARPU and Revenue(\$M) from 5G IoT, 2019-2024	34
Table 8: ARPU and Revenue(\$M) from 5G IoT, 2025-2029	
Figure 8: Revenue(\$M) from 5G IoT, 2019-2029	34
Revenue from 5G Fixed Wireless Access	35
Table 9: 5G Fixed Wireless Access Connections, 2019-2024	
Table 10: 5G Fixed Wireless Access Connections, 2025-2029	35
Figure 9: 5G Fixed Wireless Access Connections, 2019-2029	36
Table 11: ARPU and Revenue(\$M) from Fixed Wireless Access, 2019-2024	36
Table 12: ARPU and Revenue(\$M) from Fixed Wireless Access, 2025-2029	
Figure 10: Annual Revenue (\$M) from 5G Fixed Wireless Access Services, 2019-2029	37
Revenue from Advertising	
Table 13: CPM Amount and Annual Revenue from 5G Advertising, 2019-2024	
Table 14: CPM Amount and Annual Revenue from 5G Advertising, 2025-2029	
Figure 11: Annual Revenue (\$M) from 5G Advertising, 2019-2029	
Revenue from 5G Entertainment Services	
Table 15: ARPU, Penetration and Annual Revenue from 5G Entertainment Services, 20	
2024	
Table 16: ARPU, Penetration and Annual Revenue from 5G Entertainment Services, 20	
2029	
Figure 12: Annual Revenue from 5G Entertainment Services, 2019-2029	
Revenue from 5G Gaming	
Table 17: Monthly Spend, Penetration and Annual Revenue from 5G Gaming, 2019-20	
Table 18: Monthly Spend, Penetration and Annual Revenue from 5G Gaming, 2025-20	
Figure 13: Annual Revenue from Subscription and Pay-per-game 5G Gaming, 2019-203	
Figure 14: Annual Revenue from 5G Gaming, 2019-2029	
Total 5G Revenue	
Table 19: Total Annual 5G Revenue (\$M) by Service, 2019-2024	
Table 20: Total Annual 5G Revenue (\$M) by Service, 2025-2029	
Figure 15: Total Annual 5G Revenue (\$M) by Service, 2019-2029	
Figure 16: Total Annual 5G Revenue (\$M), 2019-2029	
Table 21: Total Annual 5G Revenue by Service (Percent), 2019-2024	
Table 22: Total Annual 5G Revenue by Service (Percent), 2025-2029	
Figure 17: Total Annual 5G Revenue by Service (Percent), 2019-2029	
Table 23: Blended ARPU for all 5G Services, 2019-2024	
Table 24: Blended ARPU for all 5G Services, 2025-2029	46

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Figure 18: Blended ARPU for all 5G Services, 2019-2029	46
Definitions	47
Definitions Table	47
About iGR	65
Disclaimer	65

## **Abstract**

5G has arrived in the Asia Pacific region. Operators in South Korea, China and Australia all launched a 5G network in 2019, and several Android mobile phones that support 5G are readily available. The industry is looking forward to using 5G's capabilities to provide faster speeds to consumers and to support many use cases.

To make 5G a reality a significant amount has been invested in these countries, as well as in other countries that plan to launch 5G in 2020. Now is the time to look at the revenues that can be generated with the new technology.

In this market study, *iG*R presents a model for potential 5G revenues in the Asia Pacific region from now until 2029. It is important to note that although the mobile operators have been the investors in the 5G network, the revenue generated from the 5G ecosystem will be spread among many additional entities such as content providers, cloud providers, gaming developers, and advertisers. This model does not include revenues from 5G devices or applications.

Included in the model are six major sources of revenue provided by the 5G ecosystem. These include:

- 5G Mobile Service
- 5G IoT
- 5G Fixed Wireless Access
- 5G Advertising
- 5G Entertainment Services
- 5G Gaming.

The business model for the seventh potential source of revenue, network slicing, is still too undefined to be included in the model.

This market study provides a 10-year forecast for potential 5G revenue. The potential revenues provided by mobile, IoT, fixed wireless access, advertising, entertainment and gaming services are presented separately. This market study also provides information on the requirements of 5G and the timeline of its continued deployment, as well as the recent 5G initiatives of several mobile operators in the Asia Pacific region.

Key questions addressed in this market study include:

- What is 5G and how is it defined? What is the timeline of its continued deployment?
- What are the expected use cases for 5G?
- How many 5G connections can be expected in Asia Pacific from 2019 to 2029?
- What are potential sources of revenue for 5G networks?
- What will the 5G mobile subscription service model look like and how much revenue will be generated?
- What is the business model for 5G IoT and how much revenue will be generated?
- What is 5G fixed wireless access and how much revenue can be generated by the service?
- How will 5G advertising generate revenue and how much can be expected?
- What is the model for 5G-based entertainment services? How much revenue will it provide?
- What is the model for 5G-based gaming? How much revenue will it provide?
- How does each source of 5G revenue compare? Which is the most significant?
- What are the total revenues expected from the 5G ecosystem from 2019 to 2029?

Who should read this market study?

- Mobile operators
- Mobile device OEMs
- Mobile service and application developers
- IoT vendors and solutions providers
- Infrastructure OEMs
- Financial analysts and investors.