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**A study of defining the relevant  
market in telecommunications and  
assessing SMP, and of  
corresponding competition policies  
and regulations**

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## **I. Introduction**

“Telecommunications Management Act” was promulgated on June 26, 2019 in Taiwan. According to “Telecommunications Management Act”, the National Communications Commission (NCC) has drafted related regulations, including “Regulations Governing the Determination and Cancellation of Significant Market Power”, “Regulations Governing Interconnection involving Significant Market Power”, “Regulations governing fees of Telecommunications Enterprise with Significant Market Power” and “Accounting Standards and Regulations for the Telecommunications Enterprise with Significant Market Power”.

Therefore, this study aims to complete the implementation procedures of the four regulations mentioned above, including data collection and analysis for relevant markets, SMP assessment and suggested remedies for SMP in relevant markets.

In addition, this study reviews the implementation results of defined relevant markets and SMP assessment, and studies the appropriateness of the provisions of the above regulations. The

conclusion of this study provides a reference for the amendment of regulations, if needed, and competition policy.

## **II. Methodology**

Various research methods were adopted in this research, including the methods of literature review, public consultant, market analysis, focus group discussion and comparative analysis.

### **1. Literature review**

This research analyzed the principles of market definition, SMP assessment and remedies for SMP in EU and UK, and the related cases. It provides a reference for conducting the follow-up research and analysis of the definition of relevant market in telecommunications in Taiwan, and the assessment of SMP and proposed remedies.

### **2. Public consultant**

After the “Telecommunications Management Act” was promulgated, NCC has drafted four related SMP regulations. In order to ensure the continuity of laws and regulations and the operability in practice, this study collected opinions from stakeholders through the public consultant or related meeting, and analyzed these opinions. The analysis results would provide

the authority for reference in formulating relevant regulations and policies.

### **3. Market analysis**

This research has conducted market analysis of defined relevant markets in telecommunications, according to the criteria required by "Telecommunications Management Act" and "Regulations Governing the Determination and Cancellation of Significant Market Power".

### **4. Focus Group**

In order to review the proposed market definition in telecommunications in Taiwan and the implementation of relevant laws and regulations for SMP, as well as understanding whether the transition of the regulations is smooth, this research used focus group discussion, inviting experts, operators and scholars to discuss related issues. Six focus group discussions have been arranged to collect the opinions and feedbacks for the proposed market definition in telecommunications in Taiwan and the implementation of relevant regulations for SMP in



telecommunications sector.

## **5. Comparative study**

Three research papers under this study were conducted to compare the international practices and the policies/practices in Taiwan. The research topics include the essential facilities, the policy and regulations for submarine cable and cable landing stations, and the SMP regulations and implementation. Based on the comparative research results and the aforementioned expert discussions, it is helpful to draw the conclusion and suggestions for the relevant regulations or policies on market definition of telecommunications and SMP assessment and remedies to the Taiwanese authority.

### **III. Main Findings**

#### **1. Defining the relevant market in telecommunications in Taiwan**

With reference to the approach of European Union (EU), “Telecommunications Management Act” has introduced market definition and market competition evaluation mechanism to define relevant markets subject to ex-ante regulation; to conduct a competitive analysis thereon; and to adopt asymmetric “ex ante” control measures with respect to SMP. It is in order to maintain fair competition in the specific telecommunications services markets and to activate the development thereof. As for other services markets, operators are required to comply with general obligations, giving them more operating flexibility under the market mechanism to facilitate market competitions.

In terms of the procedure of defining relevant market of telecommunications, in accordance with the requirements on “Telecommunications Management Act” and “Regulations Governing the Determination and Cancellation of Significant Market Power”, four factors should be considered in the definition of a specific telecommunication service market,

including:

1. The development level of technology and services;
2. The importance of the overall telecommunication service market;
3. The area or scope of competition and the demand or supply of the service substitution;
4. The structure and competition of the telecommunications service market.

The authority shall regularly review the scope of specific telecommunications service market definitions every three years.

After evaluating four factors required by the “Telecommunications Management Act” and “Regulations Governing the Determination and Cancellation of Significant Market Power”, this research proposes to define five specific telecommunications service markets that should “ex ante” control, including fixed-line voice retail service market and fixed-line broadband retail service market, fixed-line wholesale service market, fixed-line voice connection service market, and

mobile network voice connection service market.

## 2. SMP assessment and specific remedies

In terms of SMP assessment, the criteria to designate significant market powers are according to the article 4 and 5 of “Regulations Governing the Determination and Cancellation of Significant Market Power”. In short, those with a significant market position are considered to be those with significant ability to influence market prices or service conditions. The criteria include the relative scale of the business, barriers to market entry, technological and commercial advantages, having a dominant position in capital market or capital acquisition ability, and with a market share more than a certain ratio. For those with a market share of more than 40%, the competent authority shall comprehensively consider the market structure to determine whether there is a significant market position; for those with a market share of more than 50% continuously, it is presumed to have a significant market player position.

Regarding SMP determinations and specific remedies,

Chunghwa Telecom is recommended for each specific telecommunication service market in Taiwan. The mobile network service market only regulates mobile network voice connection service market, and it is suggested to regulate all Mobile Network Operator (MNO) in Taiwan. In fixed-line voice retail service market and fixed-line broadband retail service market, fee control measures and an accounting separation system are proposed to implement to the designated SMP. For fixed-line wholesale service market, fixed-line voice connection service market, and mobile network voice connection service market, in addition to the fee control measures and establishing an accounting separation system, the remedies of interconnection obligation, reference of interconnection offer are proposed, and the calculation of voice termination rate is applied to both fixed-line voice connection service market and mobile network voice connection service market.

### 3. International comparison

Since the EU adopted the market definition approach, it has undergone four revisions in 2003, 2007, 2014, and 2020, and the

number of defined markets has been reduced from 18 to 4. The first 18 markets were also evaluated on the basis of the principle of continuation of control to examine the relevant market which must be subject to “ex ante” control.

This is the first time for Taiwan to define relevant market in telecommunications. This study also refers to the EU's practice, and evaluates whether it needs to be defined as a specific telecommunication service market based on the smooth transition principle and according to the law. Drawing on the experience of the European Union, it is suggested that the authority gradually consider whether there is room for unwinding, depending on future technological development and application status, and in line with the development of Taiwan's telecommunications industry or digital economy development policies.

In addition, this research analyzes the regulations of SMP in the United Kingdom, South Korea, and Australia, and finds that the aforementioned countries mainly regulate the wholesale service market, and the obligations (control measures) imposed on the SMP are mainly for rate control and open

interconnection/access obligations. The UK and Australia both attach importance to the market development of high-speed optical fiber or high-speed broadband networks. For example, the UK's wholesale price limit for ultra-high-speed broadband services with Openreach below 40 Mbit/s is capped by inflation, but with the rate higher than 40 Mbit/s, it is allowed to charge higher prices to encourage fiber optic construction. Australia regulates ultra-high-speed broadband network access services, depending on regional competition, but small businesses can be exempted from the control to encourage competition.

In addition, the United Kingdom, South Korea, and Australia also regulate the mobile termination service market. All MNOs are identified as regulated targets in the three countries. The United Kingdom once exempted small MNO companies from controlling mobile termination fee, but since unregulated companies charged excessively high rates, the authority regulated the mobile termination fee to all companies(MNOs) afterwards. In the fixed line related service market, three

countries mainly regulate the incumbent operator, and it may vary with the regional competition status.

The proposed market definition in telecom sector and SMP designation of each market in Taiwan in this research are mainly consist with the international practice. In the mobile network voice connection service market that includes the mobile origination and termination service, all MNOs are designated as the SMPs. However, referring to the experience of U.K., it is suggested the authority may consider to exempting the small telecom operators from the SMP obligations, and periodically review the status of market competition. The authority may then tighten the control if it finds the unfair competition due to the lifted regulations.



#### **IV. Recommendations**

The recommendations of this study are as follows:

##### **1. Types and methods of data collection**

###### **(1) Information on the type II telecommunications enterprise**

It is recommended that the authority in Taiwan should collect relevant information on the type II telecommunications enterprise (under previous “Telecommunications Act”), according to article 3 of “Regulations Governing the Determination and Cancellation of Significant Market Power”, assessing whether it is necessary to define the market.

###### **(2) Information on the emerging digital services**

In view of the emerging digital services such as low-orbit satellites and OTT communication services, it is suggested that the aforementioned emerging digital services should be considered from the perspective of alternative services when conducting market definition and market analysis for different specific telecommunications services. For example, when evaluating the alternatives of fixed-line broadband retail

services, low-orbit satellites are not yet mature and not enough to form an alternative service. It is recommended that the competent authority collect information about low-orbit satellites on a regular basis, such as providers, number of users, revenue, etc., to grasp its market development status. In the future, even if there is no need to define the market separately, it can also be used for alternative service evaluations in specific relevant market.

### (3) Information on reports

All Type I telecommunications enterprises under the "Telecommunications Act" must provide separate accounting statements, but according to Article 34 of the "Telecommunications Management Act," those with a non-significant market position are not required to submit separate accounting statements. As the procedures for market definition and SMP designation are still in progress, the competent authority still requires the operators to provide separate accounting statements. After the related procedures are completed in the future, it is recommended that the competent

authority can simplify the provision of information of non-SMPs, so as to reduce the burden on those operators but also collect data required by the competent authority.

#### (4) Establishing data reporting and collection system

It is recommended that in the future, the authority could build a system allowing the operators or telecommunications enterprises directly fill in the data, with the required the data format and content requested by the authority in each specific telecommunications service market. It is to facilitate the preservation, accuracy, and auditability of the data, and benefit the authorities or other users to export data for follow-up statistics or other data processing.

## **2. Recommendation for amendments to regulations**

At this stage, there is no need for amendments to the relevant sub-laws. The definition of the specific telecommunication service market can be reviewed regularly every three years, depending on the formal implementation of the four sub-laws

(regulations), and then the authority can also examine whether there is a need to amend the law and regulations.

### **3. Essential facilities**

When inspecting the scope of essential facilities in the future, it is recommended to exclude the local loop. Based on the principles of relaxing regulations and encouraging investment, it is recommended not to incorporate optical fiber into essential facilities for the time being.

### **4. Submarine cable circuit rental market and submarine cable landing station control**

This study considered that the submarine cable circuit rental market does not need to be defined as a specific telecommunication service market.

For submarine cable landing station control, after “Telecommunications Management Act” is passed, it is not

recommended to integrate the possible solutions for the interconnection (including access) of the international submarine cable landing station into essential facilities. If there is a need to interact with international submarine cable landing station, a telecommunications company should follow Article 5 of “Telecommunications Management Act”, and request interconnection in accordance with Article 13 of “Telecommunications Management Act”.

## **5. Frequency and Network Sharing**

In terms of supervision, the competent authority should continue to pay attention to the impact of frequency and/or network sharing on the market structure, market competition, identification of dominant players, etc., whether the cooperating parties abide by their commitments, as well as whether the cooperation is limited to the network level. If the two parties have anti-competitive behaviors in the future, the market analysis should be conducted to evaluate whether the market

share of the two should be combined to reflect their market power.

## **6. Vertical field application**

Observing the current trend of international telecommunications supervision, it finds that the traditional telecommunications market is still regulated according to the type of technology, especially the wholesale market. The ex-ante control policies for vertical field applications have not been observed yet.

It is recommended that the competent authority should continue to pay attention to the supervision policies of international vertical field applications and the current development of vertical field applications in Taiwan, based on the principle of ex post control, without the need to define the market at this moment.

## **7. Fragmentation application (smart application)**

As far as NCC is concerned, the supervision of fragmented applications (smart applications) should focus on the supervision issues related to the network connection and transmission services provided by telecommunications enterprises to application service providers, while the principle of ex post control should be adopted to encourage innovation and develop diversified smart application services.

## **8. The market definition method**

It is recommended that the current market definition should be based on the existing market definition method. Other new services should be based on the availability of data. From the perspective of service substitution, it is recommended to use qualitative or quantitative tools to assess the impact on the existing market, and to review whether the scope of market definition of specific telecommunications service market is appropriate every three years.

## **9. Supervision on co-investment and shareholding, merger, reorganization or set up a company by telecommunications companies**

Foreign frequency and/or network sharing cases mostly adopt the mode of joint ventures and are reviewed on a case-by-case basis. In the case of Asia-Pacific Telecom Co., Ltd (Asia-Pacific Telecom) and Far East Tone Telecommunications Co., Ltd (Far East Tone Telecom) sharing frequency and network, Far East Tone adopts a two-stage investment in Asia-Pacific Telecom equity model. If the two companies maintain cooperation at the network/wholesale market, it will be able to promote market competition and improve consumer rights. However, the authority should closely monitor whether these two parties have any anti-competition behaviors, and in particular whether the management, finance, and operation functions are operated independently after the second stage cooperation is completed.

In addition, spectrum is important resources for operators to



develop mobile broadband services. If the cooperation between two companies involves shareholding or decision-making power of the board of directors, it may involve group identification. When the operators seek spectrum resources in the future, the competent authority should still review its application qualifications.