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**The Impact of Newly-Emerging Media
on the Cable TV Industry**

Taiwan Communications Society

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I. Background

The development of the newly-emerging media platforms such as IPTV, Web TV, and OTT TV have changed the way people watch TV. They have also had a great impact on traditional cable TV, while also bringing challenges to the current broadcasting laws and telecommunications laws in many countries. This study seeks to analyze the development of the newly-emerging media platforms and their impact on the cable TV industry. It also analyzes how the developed countries are revising their laws to accommodate the changes. Taiwan's cable operators can learn from their experiences.

II. Purpose of Study

1. Collecting information from the literature about the current industry development of newly-emerging media platforms such as IPTV, Web TV, OTT (through STB and Internet TV) and their effects on cable television in several advanced countries including the UK, the Netherlands, the U.S., Japan, South Korea and China.
2. Investigating the current development of newly-emerging media services and its effect on the cable TV industry in Taiwan.

3. Investigating and analyzing cable TV systems operators' countermeasures toward the influence of the newly-emerging media platforms and their impact on the cable TV industry. The dimensions of such impacts include the infrastructure, business model, the audio-visual content, the application service, operations, and finance.
4. Understanding the advanced countries' promotion experiences of the newly-emerging media and providing recommendations to the National Communications Commission (NCC).

III . Research Method

The research methods employed include a literature review, in-depth interviews, focus groups, and secondary analysis.

1. Literature Review:

Collecting information, laws and documents of the newly-emerging platforms in the UK, the U.S., Japan, South Korea, the Netherlands and China, then comparing their development and regulations.

2. Secondary Analysis:

Studying the materials, documents, laws and regulations, journal articles from international consulting companies, professional websites, journals, and databanks to analyze the recent developments, industry strategies, business models, and communications policy regarding the newly-emerging media of advanced countries.

3. In-depth Interviews:

Conducting in-depth interviews with IPTV providers, mobile broadband

providers, OTT providers, cable MSOs, independent cable operators, content providers, NCC officials, experts and scholars.

4. Focus Groups:

This study organized three focus groups and the first one was held in Taipei. The second one was held in the South and the third one was in Taipei. The first two focused on cable TV operators. The third focus group invited government officials, cable operators, OTT players, and channel operators, etc.

IV. The Analysis of Competition and Communications Policy Regarding Newly-emerging Media in the Advanced Countries

1. U.S.

➤ Market Competition

In the U.S., the OTT video services have developed very rapidly. Famous OTT video services include YouTube, Netflix, Hulu Plus, Amazon, Google TV, Apple TV, OpenFilm, Redbox, etc.

According to a report prepared by Experian Marketing Services, the number of cord-cutters who have broadband and have never subscribed to or stopped subscribing to cable or satellite has risen from 5.1 million homes to 7.6 million homes in just three years. In 2013, 6.5 percent of households in the U.S. stopped the subscription service. In addition, one fifth of Americans who use OTT TV do not subscribe to cable TV (Stenovc, 2014, April 17). It is estimated that cable companies lost

86,000 subscribers in March 2015. Satellite providers also lost 74,000 subscribers (Snider, 2015, May 11).

The existing broadcasters were worried that customers who subscribed to SVOD would cancel their traditional pay TV service. In fact, SVOD and Pay TV packages involve different types of payment. Fearing an increase in the number of cord-cutters which is influenced by the newly-emerging platforms, the pay-TV providers have started to acquire other players in order to increase their market share. For instance, AT&T is in the process of acquiring DirecTV. Charter Communications also wants to acquire Time Warner Cable (Carnette, 2014, November 8).

➤ **Analysis of the Communications Policy**

The Telecommunications Act of 1996 attempts to move all telecommunications markets toward competition by deregulating the law. The FCC regulates basic cable rates only when there is no effective competition (CASBAA, 2012). The 1992 Cable Act gave local commercial television stations the option of selecting must-carry or retransmission consent for each cable system serving the same market as the commercial television station (FCC, 2012).

However, the regulations for cable TV and other MVPDs are not applied to the OTT providers. There are questions about whether some new online video distribution services qualify as MVPDs and are subject to some of the MVPD obligations in the Communications Act. In December 2014, the FCC tried to extend the scope of the MVPDs by proposing the Notice of Proposed Rulemaking (“NPRM”) to interpret the term MVPD to mean

distributors of multiple linear video programming streams, including Internet-based services (FCC, 2014). The FCC tentatively concludes that only subscription linear services offering video programming on a subscription linear basis should be categorized as MVPDs.

2. UK:

➤ Market Competition

In 2013, half of the people in the UK were able to access multi-channel television at home through Freeview. Among them, 37% of them used Freeview to access multichannel television at home, while 31% used satellite and 14% used cable (Ofcom, 2014a).

The major cable operator in the United Kingdom, Virgin Media, reported that there were 12.58 million subscribers in the third quarter of 2014. 70,000 were new subscribers. The increase in the number of subscribers came mainly from broadband users, followed by fixed phone and digital cable TV users. In general, there has been an increase in the total number of subscribers. However, more people choose the broadband service rather than the audio-visual service (Virgin Media, 2014).

The usage pattern of SVOD in the UK is similar to that in the US. The OTT service is typically a complement of, but not a substitute for, pay TV. A survey in 2014 found that 67% of Netflix customers and 77% of Amazon Prime customers also had pay TV (Deloitte, 2014).

In the UK, the OTT players include BBC iPlayer, LOVEFiLM, Netflix, Tesco, blinkbox, NOW TV, and YouView (ABI, 2014). YouView is a joint venture involving the BBC, ITV, Channel 4, Five, BT, TalkTalk, and Arqiva (BBC News, 2012, July 4).

➤ **Analysis of the Communications Policy**

In the UK, Sky exploits its market power by limiting the wholesale distribution of its premium channels and restricting competition from retailers on other platforms. Such information reduces consumer choice and holds back innovation by companies other than Sky. Ofcom used Section 316 of the Communications Act to ensure fair and effective competition by requiring Sky to offer the most important sports channels to retailers on other platforms (Ofcom, 2010).

By adopting the Audiovisual Media Services Directive (AVMSD) in 2007, the EU broadened the scope of the broadcasting rules to include every “audiovisual media service” (AVMS). The idea was to cover all video services, irrespective of the platform or technology used to deliver them to the users. Therefore, the AVMS is defined by the following seven criteria: (a) an economic service; (b) under editorial responsibility; (c) of which the principal purpose is; (d) the provision of programs; (e) in order to inform/educate/entertain; (f) to the general public; (g) by electronic communications networks (Valcke & Ausloos, 2013).

Ofcom mainly follows the EU’s AVMSD. In 2012, the regulation of video-on-demand services included a new legal definition of “on-demand programmer services” and the setting up of a legal framework for a regulatory system for such services, including one or more co-regulatory bodies. For instance, the ATVOD (The Authority for Television On Demand) is a co-regulatory body of the VOD services.

3. Netherlands

➤ **Market Competition**

The penetration of cable TV in the Netherlands is very high in the world. Up to 93% of households there once had cable subscription. Ziggo is the largest cable operator in the Netherlands, providing cable television, broadband Internet, and telephone service to customers. KPN and CanalDigitaal are Ziggo's major competitors.

Most of the customers watch digital television through cable television. However, they have gradually switched to watching IPTV through DSL or FTTH service, making the cable television lose its market share (Albrecht, 2014). For instance, Ziggo's market share has fallen by 4 percentage points over the past year (Digital TV News, August 23, 2015).

The OTT services in the Netherlands include three main services: Netflix, Videoland and NLZiet. Netflix is the most popular OTT video service in the Netherlands. More than ten percent of Dutch households had a Netflix subscription in 2014. The OTT has not yet had a direct impact on cable television operators even though it is transnational. According to a survey conducted by Deloitte in 2014, the current SVOD (Subscription Video on Demand) in the Netherlands is regarded as a complementary service rather than an alternative one.

➤ **Analysis of the Communications Policy**

Based on the latest Communication and Media Law Amendment in the Netherlands, cable Television, IPTV, DTH (direct-to-home), and DTT (digital terrestrial television) are viewed as the same digital television market. They are regulated by CvdM, the regulatory authority for media in the Netherlands, which has a duty to promote media diversity which it

achieves by supervising the concentration of media ownership.

According to the EU's AVMSD, there is a distinction between a "linear" and "nonlinear" audiovisual media service. However, the EU's Hybrid TV pattern is such that the linear and nonlinear services always compete for the same TV screen, which provides the same kind of content to the viewers in two ways. In addition, some newly-organized functions of nonlinear content can also be converted into linear content like YouTube Leanback, which easily confuses viewers. As a result, the EU thinks that the regulatory distinction between linear and nonlinear service in AVMSD needs to be re-examined.

4. Japan

➤ Market Competition

According to a survey conducted in 2013, in Japan 99.8% of households own television sets and each person spends 3 hours each day watching TV. Japanese people tend to watch more broadcast television. In September 2014, there were 27.84 million cable television subscribers (Ministry of Internal Affairs and Communications, 2015).

In Japan, broadcast television has dominated the TV market even though its market has been saturated. However, both broadcast and cable television are encountering competition with an emerging media industry such as IPTV and OTT (Asami, 2011).

Currently, VOD (Video On Demand) subscription is not prevalent in Japan, but in the future OTT services may see a sharp increase if they can have enough content. In Japan, YouTube and Amazon, the foreign stream media, are the major services for subscribers; especially, YouTube, which

has a strong impact on the business model of OTT services in Japan.

In order to encounter the emerging media platform, J:COM, the largest cable television system operator, provides “triple play” service consisting of televisions, telephones, and the Internet. In 2012, Everywhere service was launched; besides, J:COM and the OTT operator, acTVila, cooperate together to provide multiple interaction services like online delivery, TV games, voting, online shopping and so forth.

➤ **Analysis of the Communications Policy**

In order to cope with convergence, the Japanese government merged four broadcasting related laws and integrated them into one broadcasting law which classified the media into two categories: basic broadcasting and general broadcasting. Basic broadcasting refers to AM, FM, Shortwave Radio (SW), Broadcasting Satellite (BS), and the 100th meridian East Communication Satellite (CS) digital broadcasting. General broadcasting refers to broadcasting other than basic broadcasting such as cable television and IPTV, and 124/128 meridian East digital broadcasting (Nishioka and Sugaya, 2014).

In Japan, cable television and IPTV do not use the public’s airwaves or spectrum and their marketing shares are much lower than that of terrestrial broadcasting. Therefore, the “general broadcasting” regulation is looser than that of “basic broadcasting.” General broadcasting operators only need to register or notify the Ministry of Internal Affairs and Communications (MIC). No license is required. There is no regulation to limit foreign investment, rates or market thresholds. Currently, there is no specific regulation for OTT TV.

5. Korea

➤ Market Competition

Korea divides its cable television industry into 77 business areas. There are 92 system operators in total and around 80% of cable television subscribers are owned by the top five MSO (CJ Hellovision, T-broad, C&M, HCN, CMB) which have 77 system operators as their affiliates (NCC, 2014).

The revenue from cable television in 2013 declined by 1.7% compared to that in 2012. The challenge of IPTV's bundling strategy has brought about the decline of the cable subscriber's monthly license fee, but its revenue keeps growing, because the TV shopping channel has become the major source of revenue (NCC, 2014). In recent years, cable television operators in Korea have started to use the same network architecture to provide a bundled service, consisting of televisions, the Internet and phone service (Lee, 2013).

Currently, over 20 million people use OTT services. The penetration rate of smartphones in Korea is up to 73%, ranked the top in the world, which has made mobile TV become the main factor for the growth of the OTT market (AsiaOTT News, 2014). Confronted with the market impact caused by emerging media like IPTV and OTT services, cable television in Korea has also launched OTT services and TV Everywhere.

Pooq and tving are popular OTT services in Korea. MBC and SBS, the major terrestrial TV providers in Korea, launched pooq in 2012. Like Hulu, pooq's strength is its content, but pooq obtains its content only from terrestrial TV. Tving, owned by cable MSO CJ HelloVision, a

multiple system program operator (MSP), was launched in 2010.

Although tving is more expensive than other OTT services, it has attained 6 million subscribers, because it has the “first-mover advantage” and diverse content (Kim, Kim & Nam, 2015).

➤ **Analysis of the Communications Policy**

In Korea, cable TV and IP TV are regulated, but OTT TV is not regulated. Rigid regulations are imposed on cable television service, including must carry, public channels, domestic made content, regulations on the broadcasting content and commercial ads.

In recent years, the OTT service providers have increased sharply, thereby raising the issue of network neutrality; as a result, the KCC released the “Network Neutrality and Traffic Management Rule”, which aims at setting up the guiding principles for users’ rights, non-discriminatory treatment, legal content without being hindered, and rational flow management (OECD, 2014).

Nevertheless, most of the telecom operators have begun to complain that their profits have been infringed by the OTT operators, so the KCC set up the “rational flow management rule”, allowing mobile broadcast operators to charge mVoIP operators extra fees resulting from excessive flows. In 2013, the KCC established the network neutrality advisory committee, and discussed the issue of network neutrality and the possibility of passing network neutrality legislation, but it has not yet been finalized (Rajah & Tann, 2014).

6. China

➤ Market competition

In China, at the end of October 2014, 224 million households subscribed to cable television, and 179 million households adopted digital cable television. After the digitalization of cable television in China, three network integration and Next Generation Broadcasting (NGB) subsequently began to develop.

The number of Internet users who watch videos online has increased rapidly in recent years. By June 2014, there were 439 million Internet users, and the growth rate of subscribers was 2.5%. The rate of online video users was 69.4%, whereas the growth rate of cable television users and digital users slowed down in 2013 (The Internet News Center Chinese, 2014).

The business opportunities of the OTT TV in China first came from illegal set-top boxes, which helped Internet users download pirated movies and watch them on TV. Afterwards, online video websites followed up that move. The rapid growth of China's broadband infrastructure has fueled the growth of multiple online video platforms. The large online video players such as Youku/Tudou (Alibaba minority ownership), Tencent, Sohu, and iQiYi (Baidu owned) are well-funded and are driving demand for content (Schechter, 2015).

➤ Analysis of the Communications Policy

In China, IPTV cannot be operated by telephone companies. The State Administration of Radio, Film, and Television (SARFT) has only granted licenses to broadcasters. Telephone companies can only play the role of

delivering the content.

With regard to OTT TV, the SARFT has only granted OTT TV licenses to five broadcasting groups and two radio stations. Online video platforms such as Youku/Tudou, Tencent, Sohu, and iQiYi are not regarded as OTT TV. The content aggregators have to cooperate with any one of the seven OTT license holders in order to play the role of OTT providers.

There is content regulation for the online video platforms as well. For instance, the quota for imported content is limited. The imported content has to be screened and permission has to be applied for as well.

V. The Analysis of Competition between Cable Television and the Newly-emerging Media Platforms in Taiwan

According to statistics provided by the NCC, in March 2015, the top 5 MSOs, Kbro, CNS, TBC, TFN MEDIA and Taiwan Optical Platform, owned 34 cable system operators, accounting for 73.53% of subscriber households in Taiwan. Although the cable operators view the IPTV operator, namely, Chunghwa Telecom's MOD, as the largest competitor, some domestic scholars think that the operating strategy of Chunghwa Telecom's MOD is very conservative; that is, the linear channels of MOD basically duplicate the model of the cable television system, but unappealing channels that are low in price are insufficient to attract viewers.

Although OTT video service is the future media trend, a successful and profitable model of the newly-emerging media industry has not yet been

figured out. Based on the domestic and foreign literature, and this study, which integrates the opinions of the industry players, OTT operators can be classified as follows: network operators, content retailers, traditional broadcasters, content aggregators, user generated content, and the equipment industry operators.

1. Network Operators

Telecom operators in Taiwan have been desperate to participate in the OTT market; after the upgrading to 4G-broadband, smoother and higher quality video service can be provided. For instance, Taiwan Mobile is engaged in integrating mobile video, mobile shopping and entertainment. In November, 2012, Taiwan Mobile cooperated with kbro, launched My Video, provided kbro content, and also entered a joint venture with Chinese operators to make a drama series, thereby making the content more multifarious.

2. Content Retailers

Telecom operators use broadband network to their own advantage to provide OTT value-added services. There are also video services like those provided by the DVD rental shop operators which acquire film archives to provide the service of watching movies on demand, such as Google Play, Apple iTunes, GoMovie and so on.

3. Traditional Broadcasters/Content Providers

Traditional broadcasters such as FTV and content providers such as Coture and AfreecaTV have extended their services to make proprietary APP or

set up websites which provide 24-hour OTT services.

4. Content Aggregators

Content aggregators integrate channels, videos or other value-added services, providing platform interface for users to choose services like LiTV, TW-AIRNET 5TV, TV GO and so on.

5. Content Connection Providers

These kinds of operators include many small operators, who provide services through video integration and connection, and both individuals and companies can operate once they have obtained some skills. They integrate and edit free content, whether with copyright or not, to set up websites such as MyVideos, intv.ourtoolbar.com, krdrama.meikutv.com, Love TV Show, and so forth, or to launch APP, which are available to users freely, but the content may not be authorized.

6. User Generated Content (UGC) Operators

User generated content operators mainly enable users to upload videos taken by themselves online. Some operators also provide linear services like YouTube, the largest UGC website.

7. Connected TV with Services (Equipment Industry Operators)

Terminal device operators (like connected TV, set-top box, and dongle operators) also participate in running the OTT video services. Currently, the operators providing OTT terminal services include Samsung smart TV, Sony Entertainment Network, Panasonic, BenQ (Smart LED Apps/BenQ

Clouds Multimedia), LiTV of Sampo Tatumg, ZINTV, and dongle operators, which provide all kinds of application service functions of connected TV.

VI. Important Findings

- 1. Cable TV's major competition is CHT's MOD which is a kind of IPTV service. The cable TV industry hopes that the government will treat cable TV and IPTV operators fairly.**

According to the NCC's survey, by the end of March 2015, there were 5,012,159 cable TV subscribers which represents a penetration rate of 59.65%. Digital cable penetration is 82.44%. Cable TV's major competition is CHT's MOD which has 1,286,077 subscribers. Currently, although cable TV operators can expand their service areas, they are still facing problems such as horizontal and vertical limitations, the tiering system, the must carry rule, and the fact that the government cannot own cable TV shares. When cable TV goes digital, the benefits are not obvious. This study has collected the opinions of the cable operators and has urged the government to provide a fair competition environment for the cable TV industry and to deregulate the outdated regulations.

- 2. Cable TV operators worldwide have expanded their business to actively provide full service.**

The cable TV operators have also been influenced by the newly-emerging

media in advanced countries such as the US, the UK, the Netherlands, Japan, and South Korea. In the process of digitization, they tend to provide triple play or quadruple play bundled services which cover TV, broadband, and the Internet. They use one bill to hold the customers. Some also provide mobile strategies such as TV everywhere, Cable Wi-Fi, or APP applications. In the US, Comcast and Time Warner Cable both provide a smart home security system which goes beyond TV service. In the Netherlands, Ziggo provides a UCC cloud service for small and medium-sized enterprises. Their innovative business models can be studied by Taiwan's cable TV.

3. The cable operators in the US, UK, Japan, the Netherlands and China have started to merge in order to expand their economic scale.

In order to expand their economic scale and integrate local fixed networks and make cable TV more competitive in the convergence market, Virgin Media in the UK, Ziggo in the Netherlands, and KDDI in Japan have all merged with the second largest operators in their countries and the mergers have been approved by their respective regulators. When Taiwan decides to revise its Cable Radio and TV Law with regard to vertical and horizontal integration, it can learn from these experiences abroad.

4. IPTV might have a replacement effect on cable TV. Most countries have moved to adopt equal regulation.

IPTV and cable TV are both pay TV. When IPTV emerged, different countries had different policies or regulations. In the US, IPTV operators have to apply for licenses from the local or state government. They are treated as cable TV. The UK, the Netherlands and Japan also treat IPTV and cable TV equally in their regulations. Korea has a special law for IPTV, but it is trying to provide a fair competition environment. Currently, cable TV and IPTV are regulated differently. The regulator in Taiwan should consider treating cable TV and IPTV equally.

5. Facing the trend of OTT, cable TV in Taiwan can manage OTT or cooperate with OTT which has a complementary effect.

When Web TV and OTT TV started to develop, cable operators in some countries did not consider OTT as their competitors. For instance, in the UK, cable operator Virgin Media cooperates with the US's OTT Netflix. In Korea, cable MSO CJ HelloVision has launched its own OTT service. The impact of OTT on cable TV is more obvious in the US. Regardless of whether cable TV should cooperate with OTT players or launch its own OTT service, the international experiences can be learned by Taiwan's cable operators.

6. Many countries have started to confront OTT TV. Taiwan's regulator should thus start to think of an appropriate measure as well.

OTT service is usually international and has no boundaries. In most

countries, the OTT services only need to be registered. However, China and Singapore require that the OTT operators apply for licenses. In the US, the FCC has proposed revising the regulation and has redefined the definition of MVPDs. It is considering including linear OTT video in the category of MVPDs. Since the OTT services have just emerged, Taiwan's regulator should consider how to cope with the OTT.

7. The cable TV operators could adopt the FMC strategy to expand their service in order to have a value-added effect.

Fixed-mobile convergence (FMC) is an important trend worldwide. Faced with the development of 3G/4G, many cable operators have started to provide FMC service. For instance, Virgin Media is the first 3G operator in the UK. The major cable MSO in Japan has been merged by KDDI and has started to provide FMC service. Ziggo in the Netherlands has bought LTE-2600 bandwidth and plans to provide WiFi and 3G/4G service. Therefore, cable operators in Taiwan could consider adopting the FMC strategy as well.

VII. Major Suggestions

Short-term suggestions

1. The cable TV industry is also developing toward IP. In order to adapt to broadband competition, it should continue deploying broadband and complete the next generation network construction.
2. In addition to the traditional TV service, the cable TV industry should develop a TV Everywhere/ TV Anywhere business strategy and a

diverse business model. It should develop a full service and innovative business model.

3. The regulator should encourage newly-emerging media platforms such as the OTT. However when facing the illegal content and behavior shown on the OTT platform, the government should enforce the current law to stop the illegal practice.
4. After cable TV becomes digital, when facing the increased number of channels and the tiering system, the current Cable Radio and TV Law should stipulate that cable TV must carry public TV channels, an aboriginal channel, and a Hakka channel. Cable operators only need carry the major channels of the commercial terrestrial TV.
5. The current Cable Radio and TV Law is too strict in that it restricts ownership of the media to the government and political parties. It should deregulate and let the government own some reasonable shares. However, political parties are still banned from owning the media.

Medium- and Long-term Suggestions

1. The cable operators, while faced with OTT competition can enter the OTT market by managing OTT business themselves or adopting a co-opetition model by cooperating and competing with other OTT players strategically.
2. The cable operators can increase their revenue by adopting a convergence model through integrating the networks of fixed networks, mobile networks and other networks.
3. The regional cable operators could consider cooperating with each

other such as by co-building fixed network platforms, cloud application platforms and content aggregators, in order to have a larger economic scale to compete with cross country or national competitors.

4. The OTT is growing. Many countries have started using different measures to govern OTT. Taiwan's regulator should start to think of an appropriate regulatory model now.
5. The convergence of telecommunications and media is one of the characteristics of digital convergence. Accommodating the convergence of telecommunications, media and Internet, the regulator should reconsider the issues of media ownership and cross media concentration.
6. Faced with converged media, Taiwan's regulator should protect consumers, encourage newly-emerging media, and set up a rate review system that is fair.
7. In Taiwan, IPTV may have a replacement effect on cable TV. The indirect ownership cap for foreigners should be the same for cable TV and telecommunications.
8. There is only one major IPTV operator in Taiwan. Cable operators can consider providing IPTV by using an Internet Protocol. The regulator can consider whether to apply a must carry rule to IPTV in order to ensure fair market competition.