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RESEARCH ARTICLE

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"Convergence of three nets" and its law transformation in China
—On response of China's antimonopoly law to the challenges of the "convergence of three nets"*

Abstract The convergence of the three nets of telecommunication, television and Internet is a general trend of development. Though the "convergence of three nets" promotes the competition in the relevant markets, it causes relatively big impacts on the existing legal order. To meet the challenges brought forth by the "convergence of three nets", many countries and regions have successively adopted effective measures for legal transformation, not only integrating laws and regulations on the telecommunication industry, but also attaching high importance to the transformation of the legal adjustment and control mode where increasingly more emphasis is laid on the influence and functions of competition law in the "convergence of three nets". China's antimonopoly law shall also play an important role during the process of the "convergence of three nets". With respect to the definition of the relevant market and identification of monopoly practices, we shall closely combine the features of the "convergence of three nets" and pointedly apply the antimonopoly law.

Keywords convergence of three nets, legal transformation, industrial law, competition law, antimonopoly law

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摘要 电信、电视、互联网三网的融合是大势所趋。“三网融合”虽然促进了相关市场的竞争，但也对现存的法律秩序造成了较大冲击。许多国家或地区为了应对“三网融合”所带来的挑战，纷纷采取卓有成效的法律变革措施，不仅对通信行业的法律规范进行了整合，而且非常强调法律调控方式的转变，即越来越重视竞争法在“三网融合”中的影响和作用。中国反垄断法在“三网融合”的进程中也应扮演重要角色。在相关市场的界定和垄断行为的认定上，我们应紧密结合“三网融合”的特点，更有针对性地适用反垄断法。

关键词 三网融合，法律变革，产业法，竞争法，反垄断法

Chinese government has put forward the “promotion of the convergence of the three nets of telecommunication, television and computer” in its “10th Five-year Plan”. After five-year development, in the “11th Five-year Plan”, it explicitly requires for “vigorous urging of the convergence of three nets”. From “promotion” to “urging”, important information has been revealed in industrial transformation: The government has determined to break through the institutional barrier in the three monopoly industries. However, the actual implementation of the “convergence of three nets” will surely trigger regulatory reform and legal transformation in monopoly industries, and the recognition and support by law are indispensable in the process. China’s antimonopoly law shall meet the challenge of the “convergence of three nets” in a more active stance and play a due role during the “convergence of three nets”.

1 “Convergence of three nets” and its impacts on the existing legal order

1.1 Development of the “convergence of three nets”

The “convergence of three nets” refers to the phenomenon and process where the relevant technologies and businesses of the networks of telecommunication, radio and television and Internet penetrate into and converge with each other under the promotion of digital technology revolution to enable the realization and transmission of the same application and content through different networks and different terminals. (Wang, 2006) Such convergence is called “digital convergence” abroad, “convergence of three nets” in the mainland of China and “digital confluence” in Taiwan of China. In legal terms, the “convergence of three nets” means that the “three nets” may access to each other mutually so as to realize the cross of business scopes where the operators of telecommunication, Internet and radio and television may engage in the operation of telecommunication, Internet and radio and television. (Fang, 2001) In the Green

Paper on the Convergence of the Telecommunication, Media and Information Technology Sectors, and the Implications for Regulation promulgated by the EU in 1997, the EU Standing Committee defined the "convergence" as follows: Convergence refers to "the ability of different network platforms to carry essentially similar kinds of services, or the coming together of consumer devices such as the telephone, television and personal commuter". According to the definition, "convergence" actually describes the process of gradual integration of different conduits and customer premise equipment. (Huang, 2003) Due to its openness, Internet has naturally converged with the networks of telecommunication and radio and television, and hence the "convergence of three nets" is actually the convergence of the telecommunication network with the radio and television network, especially the CATV network, which is also the focus of legal regulation of each country.

The "convergence of three nets" may be technically realized in the following two aspects: (1) Operators of traditional telecommunication networks develop their business scopes by extending services from traditional voice and pure data services to broadband services and going further into the field of content services. New transmission technologies, especially with the upgrading of DSL network technologies and the application of VDSL technologies, enable the realization of the transmission of TV programs by such means as Internet protocol television (IPTV), whereby telecommunication operators are able to undertake a new business mode, expanding the original business mode based on individual communication to the business mode of large-scale dissemination similar to radio and television. (2) Radio and television operators also expand their business fields. For a long time, their traditional businesses are transmission of radio signals and contents. In recent years, the upgrade of network technologies has improved the capabilities of two-way transmission of cable communication, and CATV operators have enlarged their business scope to provide broadband Internet and voice transmission services.[1]

Business convergence is the key and core of the "convergence of three nets". In a broad sense, the business forms of the "convergence of three nets" can be mainly categorized into three types: (1) The access of radio and television and telecommunication into the traditional business market of each other and the extension of business functions of traditional telecommunication network and radio and television network. For example, such business as mobile phone interaction is the extension of short message business, the business form of which has not been fundamentally changed though it is combined with radio and television. (2) A new business form generated by combining with broadband

[1] See Administration on Digital Confluence and Reform of Regulation. http://www.cpro.com.tw/channel/news/cotent/index.php?news-id 52435.

network, for instance, mobile TV, IPTV, Internet protocol radio/TV. (3) A new business form generated from between the fixed network and the mobile network (FMC). The business form of the "convergence of three nets" in a narrow sense, only refer to the second type of business forms mentioned above. Through convergence of three nets, traditional telecommunication operators may operate not only traditional radio and television businesses such as digital television, but also multimedia businesses including IPTV and mobile TV; and traditional radio and television operators may engage in not only traditional telecommunication businesses such as voice services and Internet access, but also new business forms such as Voice over Internet Protocol (VoIP). In many countries and regions, enterprises engaged in radio and television and telecommunication have entered into the traditional business markets of each other, and such convergent businesses as IPTV, mobile TV and VoIP have enjoyed a rapid growth. By the end of 2006, global IPTV subscribers amounted to about 8mn and VoIP subscribers 38mn.[2] In particular, the service of Video on Demand (VOD) combines traditional data communication business and radio and television businesses to provide information services that further gear to the demands of the public. (Wang, 2006)

1.2 Impacts of the "convergence of three nets" on the existing legal order

In general, the changes and influences brought forth by the "convergence of three nets" are huge, as such convergence obscures the market limits among industries of telecommunication, radio and television and computer and enables the transmission of all information among different platforms. Thus, to pursue business efficiency, operators will "surely grow toward all-services providers or multimedia providers." (Li, Zhang, 2005)

The "convergence of three nets" has also caused relatively big impacts on the existing legal order and caused many issues in urgent need of solution. Traditionally, the legal order in the communication industry has been established by different technical platforms and industrial departments. In other words, the telecommunication industry is subject to the adjustment by the telecommunication law and the radio and television industry by the radio and television law, while the regulation on computer and Internet industry is incorporated into the regulatory system of telecommunication. One-way and one-multiple way communication media is under the category of dissemination and shall be governed by the wireless radio and television law, the cable radio and television law and the satellite radio and television law respectively

[2] Yang Zemin, Xu Junqi: Economic Analysis and Thoughts on the Convergence of Three Nets. http://www.e-gov.org.cn/xinxihua/new008/200704/583520html.

according to the attributes of the platform used. Two-way and one-one way communication media is under the category of telecommunication and shall be governed by the telecommunication law. Since the focus of regulation on dissemination is to safeguard the freedom of expression of opinions and the value of diversified cultures, the contents of dissemination are subject to regulation to some extent; while the focus of regulation on telecommunication is to prevent telecommunication operators from preying excess profits and guarantee all citizens can equally obtain telecommunication services, and thus such economic activities as access of operators into the market and pricing are subject to regulation, and operators are required to bear the obligation of popularizing services. (Fang, 2003) The "convergence of three nets" will inevitably create severe challenges to the framework of the laws and regulations featured by division of platforms, as it will be quite difficult to categorize specific platforms into the category of telecommunication or dissemination in the trend of such convergence. (Fang, 2003) For example, whether shall the VOD service provided by telecommunication operators through telecommunication networks be governed by the CATV law or the telecommunication law? Whether shall the telephone services provided by CATV operators be governed by the telecommunication law or the CATV law? For another example, as for CATV service providers engaged in network digital services, whether shall the contents of their relevant businesses be subject to strict regulation according to the provisions of the CATV law? There are different answers in different countries or regions. In EU where the "convergence of three nets" is emphasized, for VOD service, countries have put forward various requirements for regulation. Some countries deem it as a value-added telecommunication business while some do not include it in the catalogue of telecommunication businesses. The UK and France regulate it under the regulatory framework of broadcast business, while Germany treats it as a new type of telecommunication business. A service provider who provides cross-border VOD services in EU may face "treatments" required by regulations of different natures in different countries, which will undoubtedly increase the costs and operation risks of service providers. (Bai, 2003)

It is held that the drafters of current communication laws such as the telecommunication law and the CATV law have at formulation failed to foresee the scientific and technical developments in the future. With respect to such new telecommunication businesses as IP phone and VOD service, due to their cross-platform features, it is impossible to regulate them in the traditional framework of laws. In such background, "regulation by-pass and unequal competition conditions are easy to occur for competitors, which in turn will distort market competition (e.g. cross subsidies among different departments) and bring harms to the innovation of technologies and business and consumers' benefits (e.g. improper adjustment of service charges)." (Liu, 2001) Moreover,

with respect to the contents on internetworking networks and new media emerged with the popularization of internetworking networks, the application of current regulations remains in a grey zone, and it is worth further consideration whether to apply the current telecommunication law and CATV law or to formulate specific regulations. (Fang, 2003) It is generally recognized in countries and regions that to solve thoroughly the issues arising from the "convergence of three nets", large-scale innovation is required and the relevant laws and regulations shall be timely adjusted for effective regulation of the new market order.

2 Legal transformation resulting from the "convergence of three nets"

In recent 10 years, to tackle with the challenges brought forth by the "convergence of three nets", many countries and regions have successively taken effective measures for legal transformation, not only integrating the laws and regulations on the telecommunication industry, but also attaching great importance to the transformation of legal adjustment and control mode, where increasing emphasis is laid on the impacts and functions of competition law in the "convergence of three nets", hence highly improving the position of the competition law, and the legislation on the telecommunication industry indicates a trend of "competition law orientation".

2.1 Walking out of the "jungle of laws"—integration of industrial laws

In the telecommunication industry, countries and regions traditionally formulated different industrial laws according to the features of transmission networks or platforms, such as the telecommunication law, the CATV law and the satellite broadcasting and television law. Those laws are called by some scholars as "sector-specific regulation" (Chen, 2005), which may be referred to as "industrial laws". Those industrial laws have set up different competent authorities and prescribed different operation criteria, but with development of digital technology and due to rapid advancement of the "convergence of three nets", the networks of telecommunication, CATV and radio and Internet using different carriers (networks or platforms) will converge into the so-called "digital network industry". The digital network industry may convert any materials in forms of words, sound, pictures or data, to digits, and then transmit the digitalized information to any network, no matter whatever technology or platform the network may use. In short, the digital network industry is "platform independent", which is challenging all the relevant regulations at present. (Liu, 2001) After the

"convergence of three nets", the traditional legislation according to traditional industrial division can no longer adapt to the demands of the development of time. In general, the current Chinese laws related to telecommunication, media and dissemination are a dense jungle, where the operators who ignore such laws may obtain interests from legal loopholes among different regulations, while those who observe laws are constrained by numbers of rules. What's more, it is obvious that the telecommunication market and the CATV market are excessively divided in an intentional manner, which hinders the natural development of market competition and convergence. (Liu, 2001) To meet the challenges brought forth by the development of digital network industry after the "convergence of three nets", many countries and regions have undertaken relatively big adjustments to laws so as to help them walk out of the perplexed and puzzling "jungle of laws".

Before the promulgation of the Telecommunication Act of 1996, the previous legal system of the US is a "segmented and disconnected legal system". The laws related to telecommunication mainly include three independent acts: The Interstate Commerce Act of 1887 regulating telephone businesses, the Federal Radio Act of 1927 regulating broadcast businesses and the Cable Communication Policy Act of 1984 regulating CATV businesses. There are obvious dividing lines among regulations on telephone, CATV, terrestrial broadcasting and satellite broadcasting, and when the dividing lines in terms of history, technology and market are becoming vague, the divergences existing in legal clauses are losing their actual meaning. (Bai, 2003) Hence, the Telecommunication Act of 1996 has timely integrated the laws concerning communication. In 1997, the EU definitely pointed out in the Green Paper on the Convergence of the Telecommunication, Media and Information Technology Sectors, and the Implications for Regulation that different network platforms can transmit telephone information, TV information and computer information and data at the same time. The convergence of networks is not only the convergence of different technologies, but also that of different businesses. (Zhu, Zhang, 2006) Since July 2002, the EU has set about drafting a series of new directives on regulation of electronic communication networks to replace the 20 existing directives which were made by industry and such new directives include the Directive on a Common Regulatory Framework for Electronic Communications Networks and Services, the Directive on the Authorization of Electronic Communications Networks and Services and the Directive on Access to, and Interconnection of, Electronic Communications Networks and Associated Facilities. Erkki Likanen, a member of the EU Standing Committee in charge of information societies expressed that those supporting directives removed many unnecessary obstacles in licensing policies, and meanwhile, the same treatments granted to all transmission networks due to digital convergence conformed to the tendency of convergence

of telecommunication, Internet and dissemination dominated by internetworking networks. (Dai, 2003) The Department of Trade and Industry and the Department for Culture Media and Sport of the UK promulgated A New Future for Communication—White Paper on Communication on December 2002. It explicitly pointed out that since there were several overlapped subjects of regulation according to the original legislation, rules and administrative frameworks on telecommunication and broadcasting, while the tasks and objectives of which are different, and moreover the legislative authority had formulated laws and regulations according to the specific transmission systems rather than the particularities of services, and thus, changes had to be made accordingly, so as to provide new legislative criteria for the electronic communication industry. The UK's Communication Act passed in July 2003 fully revised the relevant existing acts including the Telecommunication Act 1984, the Broadcasting Act 1996 and the Wireless Telegraphy Act 1998. Malaysia passed the Communications and Multimedia Act in 1998 and simultaneously repealed the Telecommunication Act 1950 and the Broadcasting Act 1988. (Dai, 2003) The Communications and Multimedia Act breaks through the traditional method of categorization by industry and divides the objects of regulation into four types: Network facilities providers, network service providers, applied service providers and content application service providers. Such solution of Malaysia is unique, which coincides with the direction of reform on communication laws after the "convergence of three nets" alleged by some scholars: "The ultimate solution is to formulate different regulations by the services provided for administration, rather than draw up regulations on different telecommunication and media services by different conduits". (Wang, 2006) More countries or regions have set about integrating their legislations on the communication industry to tackle with the challenges brought forth by the "convergence of three nets".

2.2 Break through "administrative barriers"—participation and penetration by competition law

Both the telecommunication industry and the radio and television industry are always regarded as natural monopoly industries and governments always regulate them by formulating special industrial laws. Such regulation, in fact, further consolidates the monopoly position of the incumbent operators, and hence the traditional regulation is a measure which restricts and reduces competition. (Liao, 2005) Since the telecommunication industry and the radio and television industry are subject to the adjustment by special industrial laws, the cases of dispute relating to those industries including cases of dispute involving competition are generally beyond the adjustment by competition law, and many countries and regions even put those industries in the scope of

exceptions to application of antimonopoly laws based on the natural attributes of those industries. Thus, some scholars hold that such regulatory approach by law constitutes "administrative barriers" (Chen, 2005), adverse to the unified application of competition law.

Later, under the impact of the wave of liberalization, almost all traditionally regulated industries are untied or released from regulation. At the stage of the "convergence of three nets", the pace toward deregulation for such industries as telecommunication and radio and television has been speeded up and the principle of priority of market mechanism has been further established. Competition starts to play a positive role instead of administrative regulation and the so-called "administrative barriers" are naturally broken, which provides a larger room for the play of the competition law system. Meanwhile, with progress of the ideas of regulatory innovation, policy-makers believe effective competition may be created by means of regulation. For instance, the US Telecommunication Act of 1996 prescribes that its purposes are to "promote competition and reduce regulation". To such end, it provides for many competitive mechanisms (Liao, 2005), which "makes the 'sector-specific regulation' adopted due to industrial particularities to be gradually repealed due to the elimination of such particularities, and finally replaced by the general competition rule." (Fang, 2001) At this time, the competition law takes initiatives to interfere in the progress of the "convergence of three nets" and competition principles and policies have been gradually penetrated into the legislation on the communication industry. There is a tendency of "competition law orientation" in the legislation on the communication industry and the limits between industrial laws and the competition law are becoming obscure.

The interference of competition law includes the replacement of industrial laws by competition law or the priority application of competition law. There are still some countries such as Australia and New Zealand that have completely replaced industrial regulatory acts by competition laws (Fan, Zhen, 2005), and still more countries have given priority to the application of their competition laws to the communication industry during the "convergence of three nets". For example, in the UK, people generally hold that priority application of the competition law shall be given to an industry which has achieved good development in competition, and meanwhile it is necessary to relax the regulation on the industry. (Flynn, Stratford, 2000) In the past, OFTEL usually started investigation from industrial regulation firstly and then decided whether to apply the competition law. Since the second half of 2002, it has tended to give priority to the application of the competition law when there is any practice in violation of the competition law and industrial rules. The priority in the application of the competition law is of the following advantages: (1) More application of the competition law will make operators and service providers observe laws more

strictly. (2) The application of the competition law enables OFTEL to handle antimonopoly practices in a more effective manner. (Xu, 2004)

The penetration of the competition law means that the competition law has started to exert impacts on the legislation of the communication industry, where the principles, policies and rules concerning competition are introduced into the legislation of the communication industry. In the US Telecommunication Act of 1996, for the purposes of lowering the access threshold for new entrants and preventing incumbent operators from hindering the entry of newcomers, the "newly-added Section 251 Interconnection provides that each telecommunication carrier has the duty to interconnect directly or indirectly with the facilities and equipment of other telecommunication carriers, and each local exchange carrier has the duties of resale, number portability, dialing parity, access to rights-of-way, and the duty to establish reciprocal compensation arrangements with other local exchange carriers. Moreover, for the purpose of facilitating competition, it specially provides that the incumbent local exchange carriers bear the duty to provide the access to network elements to other telecommunication carriers. The incumbent local exchange carriers shall provide, to any requesting telecommunication carrier for the provision of a telecommunication service, access to network elements on an unbundled basis at any technically feasible point on rates, terms and conditions that are just, reasonable and nondiscriminatory". (Liao, 2005) The Telecommunication (Amendment) Ordinance 2002 of Hong Kong SAR prescribes anti-competitive practices and abuse of position in Sections 7K and 7L respectively. (Xu, 2004) Anti-competitive practices refer to the conduct which has the purpose or effect of preventing or substantially restricting competition in a telecommunication market and regard shall be given to relevant matters including, but not limited to: Agreements to fix the price in a telecommunication market; an action preventing or restricting the supply of goods or services to competitors; agreements between licensees to share any telecommunication markets between them on agreed geographic or customer lines; and the conditions of relevant licenses. The dominant position means that a licensee is in a dominant position when it is able to act without significant competitive restraint from its competitors and customers. The relevant matters shall be taken into account, including, but not limited to: The market share of the licensee; the licensee's power to make pricing and other decisions; any barriers for competitors to entry into the relevant telecommunication market; and the degree of product differentiation and sales promotion. Article 26(1) of the Telecommunication Act of Taiwan (China) provides that: "A market dominator of Type I telecommunication enterprises shall not engage in the following practices: (1) To obstruct directly or indirectly the request of interconnection by other Type I telecommunication enterprises with its proprietary techniques; (2) to refuse to release to other Type I

telecommunication enterprises the calculation methods of its interconnection fees and other relevant materials; (3) to improperly determine, maintain or change its prices or methods of offering telecommunication services; (4) to reject the request of leasing network elements by other Type I telecommunication enterprises without due reasons; (5) to reject the request of leasing routes by other telecommunication enterprises or users without due reasons; (6) to reject the request of negotiation or testing by other telecommunication enterprises or users without due reasons; (7) to reject the request of co-location negotiation by other telecommunication enterprises without due reasons; (8) to provide discriminative treatments to other telecommunication enterprises or users without due reasons; or (9) to conduct any other practice to abuse its position or any unfair competition practice recognized by the competent authority. The aforesaid dominant market players shall be identified by the competent authority."

3 Chinese Anti-monopoly Law meets with challenges from the "conver- gence of three nets"

The Antimonopoly Law of the People's Republic of China (hereinafter referred to as the Antimonopoly Law) was passed at the 29th meeting of the Standing Committee of the 10th National People's Congress on August 30, 2007. Facing the gradual advancement of the "convergence of three nets" and its challenges to the existing legal order, how should China's antimonopoly law deal with it? What role may the antimonopoly law play in the progress of such convergence? And how can the antimonopoly enforcement agency more pointedly apply the antimonopoly law? All those issues require for our careful thinking and proper treatment.

3.1 Position and role

As mentioned above, during the "convergence of three nets", laws are transforming, which is embodied not only in the integration of laws on the telecommunication industry, but also in the participation and penetration of the competition law. However, in different countries or regions and at different stages of the "convergence of three nets", the degrees of legal transformation are different, which determines the different positions and roles of the competition law. At the early age of the "convergence of three nets", government regulations on either telecommunication industry or radio and television industry were very powerful and industrial laws were in a more important position than the competition law the position and role of which were insignificant. With advancement of such convergence and development of market competition,

government regulation has been gradually relaxed or released, and meanwhile the position of industrial laws is lowering and that of the competition law is rising with increasing impacts. When the "convergence of three nets" has reached a relatively sufficient development, the dominant position of the competition law has become more obvious. In some countries or regions, the competition law has completely replaced industrial laws, and in other countries or regions, the provisions of the competition law have been directly introduced into industrial laws, indicating a tendency of "competition-law orientation".

In view of the actual circumstances of China, there are many obstacles to the "convergence of three nets". According to the provisions of Chinese laws, the telecommunication industry and the radio and television industry are under high degree of regulation and according to Article 6 of the Opinions on Strengthening the Construction and Administration of Radio and Television Cable Networks promulgated by the Ministry of Information Industry and the State Administration of Radio, Film and Television in 1999, telecommunication enterprises are not allowed to engage in radio and television businesses and radio and television enterprises are not allowed to engage in telecommunication businesses either. Thus, the "convergence of three nets" is under a slow development in China and remains in the preliminary stage, where the industrial laws on the communication industry occupy the dominant position and play a decisive role. Though those industrial laws "emphasize regulation and exclude competition" in nature rather than "reduce regulation and promote competition", they will not necessarily lead to the conclusion of "no position and role of China's antimonopoly law". We hold that China's antimonopoly law has undoubtedly regulated the three monopoly practices: Monopoly agreements, abuse of dominant market position and concentration of operators, and with regard to the scope of exceptions to application, only Article 56 provides: "The law herein does not apply to the alliance or concerted practices of agricultural producers and economic entities in rural areas in their operation activities." This indicates that the scope of exceptions to application of China's antimonopoly law is definite, which does not include such natural monopoly industries as the telecommunication and radio and television like traditional antimonopoly law. Hence, there is room for the application of China's antimonopoly law to the industries of telecommunication and radio and television during the "convergence of three nets".

To quickly facilitate the "convergence of three nets" in China, efforts shall be made to transform laws, integrate existing industrial legislations, establish the idea of "relaxing regulation and promoting competition" and abolish any system and measure that goes against the "convergence of three nets". Once legal barriers are removed, such convergence will enjoy a rapid development in China. At this stage, the formerly closed three networks will compete with each other

and various new businesses will emerge. When there are more competitions in the market, the competition law shall gradually replace such industry-specific regulations. (Wang, 2003) Then, the position of China's antimonopoly law will rise and begin to interfere in the "convergence of three nets" to a larger extent and exert its "function of re-regulation by filling vacuum". (Fan, 2002) If at the current stage China's antimonopoly law plays its role mainly through its provisions on "abuse of dominant market position", at the stage of rapid development of the "convergence of three nets", the antimonopoly law will play its functions in multiple aspects, and fully participate in such convergence in three aspects: Monopoly agreements, abuse of dominant market position and concentration of operators.

3.2 Principles and measures

Since the traditional antimonopoly law was originated from the age of industrial economy and the "convergence of three nets" occurs in the age of new economy, it is not easy to accurately apply the antimonopoly law to the "convergence of three nets" and its related industries. The application of the antimonopoly law without serious researches may lead to opposite effects. With respect to such emerging things as the "convergence of three nets", the understanding of the antimonopoly enforcement agency is not sufficient. We shall continuously observe the development tendency of such convergence and the response of the market while we may not blindly follow regular thinking and apply existing provisions without any revision; otherwise the emerging "convergence of three nets" and its relevant industries will be strangled. However, it does not mean the "convergence of three nets" and its relevant industries may be free from the governance of the competition law, but explain that we shall prudentially apply the antimonopoly law on the basis of more clear understanding of the features of such new science and technical industry.

Therefore, it is suggested that the antimonopoly enforcement agency shall take into the following principles into consideration when implementing the antimonopoly law: (1) The principle of keeping slow rather than rapid as well as safe distance. We shall give the market more room for play of its self-adjustment and regulation and avoid adopting regulatory approaches only due to suspicion of any problem possible in the future. More importantly, we shall not preset any bottleneck equipment in the future from current technologies, equipment and market and hence adopt regulation on its basis, as the power of imagination and scientific and technical development inspired by market competition may not be underestimated. (Liu, 2001) (2) The principle of consistence of purposes and proportionality. The antimonopoly enforcement agency's "involvement" shall be conducive to the achievement of the policy purposes within the extent necessary

for the reach of such purposes and the regulatory purposes shall be achieved by way with minimum damages. Once policy purposes may be reached by means of market competition, any unnecessary regulation shall be removed. (Chen, 2003)

From the experiences of other countries and regions, facing rapid development of the "convergence of three nets", the antimonopoly enforcement agencies have taken some positive measures, though different in practices. Some countries regulate the convergence by way of formulating guidelines. For instance, the OFT (Office of Fair Trade), UK's antimonopoly enforcement agency, has formulated the Competition Act 1998: The Application in the Telecommunication Sector, which explains how to enforce and apply the Competition Act 1998 in the telecommunication sector in details.[3] The OTF also formulated the Concurrent Application to Regulated Industries in Nov. 2004, which regulated the labor division and cooperation between the competent authorities of industries including communication, natural gas and power in terms of application of the competition law.[4] Some countries give guidance by means of official speeches. For instance, the head of the Antitrust Division of the US Department of Justice delivered a speech entitled Telecommunication Competition at the 21st Annual Conference on Telecommunication Policy & Regulation on December 4, 2003, covering such contents as mobile wireless sector, local and long distance calls, multi-channel video program distribution, broadband, new technologies, the role of industrial regulation, the role of antitrust enforcement, comparison of antitrust and industry regulation, and DOJ merger review.[5] And still some countries or regions give explanations by means of policy statements. For instance, Taiwan (China) has formulated the Statements on Regulation by the Fair Trading Act of Industries Relating to CATV, the Statements on Regulation by the Fair Trading Act of the Telecommunication Industry and the Statements on the Regulation by the Fair Trading Act of Cross-sector Operation Practices in 4C Sectors respectively. Among those "statements", with respect to the operation practices of enterprises which may be involved in violation of the Fair Trading Act, explanations are given by examples, which is a kind of announcement of policies on the said industries by the competition competent authorities, while the handling of individual cases shall still be based on finding of specific facts. (Chen, 2003) It is held that among the above-mentioned three applicable measures, the approach of guidance by official speeches is of uncertainty,

[3] See Competition Act 1998: The Application in the Telecommunication Sector. http://www.oft.gov.uk/sllared_oft/business_leaflets/ca98_guidelines/oft417.pdf.

[4] See Concurrent Application to Regulated Industries. http://www.oft.gov.uk/shared_oft/business_leaflets/ca98_guidelines/oft405.pdf.

[5] See R. Hewitt Pate, Telecommunication Competition. http://www.usdoj.gov/atr/public/speeches/201734.htm.

unhelpful for enterprises to make accurate predictions of the consequences of their practices; and that by policy announcement is of weak legal binding force. Thus, it is proposed to formulate specific "guidelines on application" by reference to the practices of the UK, while the following issues concerning procedures shall be noted: (1) Facing the challenges brought forth by the "convergence of three nets", the antimonopoly enforcement agency shall take initiatives to conduct relevant researches, studying the development of such convergence and possible disputes on antimonopoly and making judgments accordingly; (2) Based on researches, relevant "green papers" or "white papers" shall be formulated and the opinions of the public shall be solicited; (3) Opinions shall be gathered for analysis and conclusion, whereby common points may be adopted and small differences may be reserved, and then, those common opinions may be put into effect in the form of "guidelines".

3.3 Enforcement agencies

During the "convergence of three nets", the issue is inevitable whether competition shall be under the jurisdiction of competent industrial departments or that of the antimonopoly enforcement agency or joint jurisdiction of them. As far as the legislations and practices of other countries or regions are concerned, there are mainly three modes: (1) All competition issues are subject to the handling of the antimonopoly enforcement agencies. In the EU, besides the enforcement of Article 81 and 82 of the Treaty, control of M&A and state assistance policies, the Directorate General for Competition is responsible for supervision over industries including telecommunication, energy, bank, insurance and media. In general, such industries as telecommunication, power, bank and insurance have been deemed as industries involved in competition and no special treatment is given to them in terms of application of laws and enforcement agencies.[6] This mode has also been adopted by Australia and New Zealand. (2) The competition issues are subject to the handling of competent industrial departments. Currently, as Malaysia has not set up the competent authority of competition law, the Telecommunication & Multimedia Commission is responsible for administering the competition order in the telecommunication market. (Dai, 2003) (3) The competent industrial departments and the antimonopoly enforcement agency share the jurisdiction, typically in the US, Germany and the UK. In the US, practices restricting competition such as monopoly agreements and abuse of monopoly position in the telecommunication industry are usually handled by the

[6] Wang Xiaoye: On the Relationship between the Antimonopoly Enforcement Agency and Competent Industrial Regulatory Agencies. http://www.civillaw.corn.cn/article/default asp? id=28604.

Department of Justice, and M&A cases involving enterprises engaged in the telecommunication industry are under the joint jurisdiction of the Federal Communications Commission (FCC), the Department of Justice and the Federal Trade Commission. In Germany, the Reg TP, an agency in charge of administrating and supervising telecommunication and post, has the power to handle some practices restricting competition in telecommunication and post markets, sharing the jurisdiction over competition issues with the Federal Cartel Office. According to the provisions of Section 54 of the UK Competition Act 1998, the OFCOM and the OFT share the jurisdiction over competition issues in the communication industry, and the Communications Act 2003 also provides that the functions and responsibilities prescribed in the Competition Act 1998 shall be jointly exercised by the OFCOM and the OFT. In summary, the first and third modes are common while a few of countries or regions adopt the second one.

Paragraph 1 of Article 10 of the Antimonopoly Law prescribes that: "The agency that bears the functions and responsibilities for antimonopoly enforcement as specified by the State Council (hereinafter referred to as the antimonopoly enforcement agency under the State Council) shall be responsible for antimonopoly enforcement pursuant to this law." Such provision has not clarified that competent industrial departments have the jurisdiction over competition issues, but we may not exclude the possibility that the State Council or industrial legislations may prescribe competent industrial departments solely or jointly enjoy the jurisdiction over competition issues. China has set up many industrial administration and supervision agencies and those concerning the "convergence of three nets" include the Ministry of Industry and Information Technology and the State Administration of Radio, Film and Television, and it is not easy for them to waive such jurisdiction. In the future, it is very likely that the Ministry of Industry and Information Technology and the State Administration of Radio, Film and Television will be authorized to deal with competition issues within their industries. If an exclusive jurisdiction over competition issues is authorized to those agencies, it is against the tendency and untimely; and if they are authorized to share the jurisdiction over competition issues with the antimonopoly enforcement agency, such issues as labor division, cooperation and coordination of them shall be clarified, and meanwhile the procedures for opinion solicitation and consultative enforcement shall be established. Competent industrial departments including the Ministry of Industry and Information Technology and the State Administration of Radio, Film and Television of China may formulate special competition rules according to the antimonopoly law, provided those rules shall coincide with the requirements of the antimonopoly law, and the antimonopoly commission under the State Council is entitled to assess those rules. From the long-term perspective, it is suggested that China learn from the advanced practices of such countries or regions as the

UN, Australia and New Zealand, leaving the competition issues completely to the antimonopoly enforcement agency, and the competent industrial departments including the Ministry of Industry and Information Technology and the State Administration of Radio, Film and Television shall not have the jurisdiction over such issues, while their functions and responsibilities shall be limited to economic regulation issues, such as promotion of services, management of fees in non-competing areas, consumer protection, technical compatibility and industry safety.

3.4 Specific systems

3.4.1 Relevant markets

In the practice of antimonopoly law, the definition of market scope is critical. A relevant market is composed of product market and regional market. The product market is a market divided according to the similarity or substitutability of products, which is measured by the cross elasticity of demands. The scope of a regional market may be an area in a country or throughout a country or even larger than a country. In practice, division of regional markets mainly depends on the sale scope of an enterprise. (Zhu, Wang, 2006)

Paragraph 2 of Article 12 of the Antimonopoly Law prescribes that: "The relevant market herein refers to the product scope and regional scope within which operators compete against each other during a certain period of time for specific products or services (hereinafter referred to as products)." As for how to further define the relevant market, there is no definite explicit provision in the Antimonopoly Law. It is more difficult to define the relevant market when the market has witnessed rapid development and changes. Digital convergence will further blur the division lines of markets and media products or services with mixing attributes of such industries as telecommunication, television or information are emerging in succession, which renders it more difficult to define the relevant market. Especially at the definition of the relevant product market, it is harder to define the scope of the relevant market of specific media products or services. For the purpose of effective regulation on competition, under the impacts brought forth by digital convergence, more sufficient market materials and professional knowledge are needed and a more precise and stricter definition of the scope of the relevant market shall be adopted. (Liu, 2005) Some scholars hold that since the cross-sector operation and convergence tendency of 4C will improve the capability of mutual substitution of various services and the demarcations among products (services) and geographical markets are becoming obscure, the factors relating to scientific and technical changes shall be considered in defining the relevant markets, which shall be identified case by case. (Chen, 2003)

3.4.2 Monopoly practices

Article 3 of the Antimonopoly Law provides: "The monopoly practices herein include: (1) Monopoly agreements reached between operators; (2) abuse of dominant market positions by operators; and (3) concentration of operators that has or may have the effect of excluding or restricting competition." At the preliminary stage of the "convergence of three nets", since it is very difficult for telecommunication and radio and television operators to access to each other's market, both markets of telecommunication and radio and television are relatively closed markets, and each market is usually controlled by one or several enterprises, which obviously constitutes the so-called "dominant market position" as prescribed in the antimonopoly law. At this stage, we shall pay close attention to the practices of operators of abuse of their dominant positions, especially the practices of monopoly with high prices, refuse of trade, restricted or designated trade and tying sale. Meanwhile, we shall pay attention to the practices of several operators to restrict competition by monopoly agreements that fix prices and divide markets. If the existence of such monopoly agreement is confirmed, the provisions of Chapter 2 of the Antimonopoly Law shall apply.

With smooth development of the "convergence of three nets", to rapidly access to each other's operation fields at the mutual opening of market, telecommunication and radio and television operators may usually adopt the strategy of M&A, or adopt cooperation through joint venture or strategic alliance, which involves the issue of concentration of operators as prescribed in the Antimonopoly Law. From MCI/WorldCom and AT&T/TCI to AOL/Time Warner, we may find that the combination of businesses is more frequent at an increasingly larger scale and even the mutual investment or strategic alliance between businesses will become closer and more complicated, which brings big challenges to traditional regulation on combination. How to reach a balance between the combined economic interests as a whole and the non-benefit of restricting competition will well test the wisdom of the enforcement agency of competition law. (Huang, 2003)

In addition, we shall notice that after realization of the "convergence of three nets", "compared with China Telecom with comparatively powerful force of monopoly, CATV obviously stays at a disadvantaged position in terms of scale of networks, business revenues and financing capability" in China. (Chen, 2003) It is very likely that telecommunication enterprises may extend their dominant market positions in the telecommunication field to CATV market against their strong powers, and hence create a situation where market competition is restricted. China Telecom is likely to take advantage of its bottleneck facilities, or adopt the methods of predatory pricing, cross subsidy, tying sale or block trade to restrict the effective competition in other markets, which shall be under strict

caution and prevention. (Huang, 2003) It may be sure that the antimonopoly law will play an important role in the progress of the "convergence of three nets".

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