

Towards trade facilitation via regulatory convergence: An analysis of the TTIP chapter on Electronic Communications

By

Markus Fredebeul-Krein

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Markus Fredebeul-Krein (Author)

Aachen University of Applied Sciences
Department of Business Studies
Eupener Str. 70
52066 Aachen/Germany
Phone +49 (0) 241 6009-51915
Fax +49 (0) 241 6009-52281
Fredebeul-Krein@fh-aachen.de

Abstract

To give the exchange of goods and services between the European Union (EU) and the United States (U.S.) new momentum the two parties are currently negotiating the transatlantic free trade agreement Transatlantic Trade and Investment Partnership (TTIP). The aim is to create the largest free trade area in the world. The agreement, once entered into force, will oblige EU countries and the U.S. to further liberalize their markets.

The negotiations on TTIP include a chapter on Electronic Communications/Telecommunications. The challenge therein will be securing commitments for market access to Electronic Communications services. At the same time, these commitments must reflect the legitimate need for consumer protection issues. The need to reduce Electronic Communications-related non-tariff barriers to trade between the Parties is due to the fact that these markets are heavily regulated. Without transnational rules as to regulations national governments can abuse these regulations to deter the market entry by new (foreign) suppliers. Thus the free trade agreement TTIP affects in many respects regulatory provisions on and access to Electronic Communications markets. The objective of this paper is therefore to examine to what extent the regulatory principles for Electronic Communications markets envisaged under TTIP will result in trade facilitation and regulatory convergence between the EU and the U.S.

As to this question the result of the analysis is that the chapter on Electronic Communications will be an important step towards facilitating trade in Electronic Communications services. At the same time some regulatory convergence will take place, but this convergence will not lead to a (full) harmonization of regulations. Rather the norm, also after TTIP negotiations will have been concluded successfully, will be mutual recognition of different regulatory regimes. Different regulations being the optimal policy response in different market settings will continue to exist. Moreover, it is very unlikely that such regulatory principles for the Electronic Communications sector are a vehicle for a race to the bottom in levels of consumer protection.

Keywords: regulation, liberalisation, electronic communications markets, TTIP

1. Introduction

To give the exchange of goods and services between the European Union (EU) and the United States (U.S.) new momentum the two parties are currently negotiating the transatlantic free trade agreement Transatlantic Trade and Investment Partnership

(TTIP). The aim is to create the largest free trade area in the world. The agreement, once entered into force, will oblige EU countries and the U.S. to further liberalize their markets.

The negotiations on the TTIP include a chapter on Electronic Communications/Telecommunications. The challenge therein will be securing commitments for market access to Electronic Communications services. At the same time, these commitments must reflect the legitimate need for consumer protection issues. The need to reduce Electronic Communications-related non-tariff barriers to trade between the Parties is due to the fact that there are different rules for the regulation of these markets in the EU and the US which may create market access barriers. TTIP aims at a comprehensive reduction of non-tariff barriers. To achieve this goal regulatory principles in view of regulatory convergence are to be established for Electronic Communications markets. The objective of this paper is therefore to investigate, in how far these principles will result in regulatory convergence.

As to this objective the question is whether the new rules will ensure that companies from the U.S. and the EU can compete in foreign markets on the same terms as domestic firms. The European Commission has recently stated that it expects the ICT chapter of TTIP to encourage more competitive markets, ensuring a level playing field for EU and U.S. firms (European Commission, 2015a). Yet, it may also be that the agreement will allow signatories to undermine competition (by foreign firms) on their Electronic Communications markets. When analyzing this question attention will also be given to a possible side effect: That the agreement results in lower EU consumer standards such as on universal services.

The analysis will be based on documents being available on TTIP. Until recently TTIP negotiation documents were not public. It was therefore difficult to know exactly to what extent negotiations on facilitating trade in Electronic Communications services have already made progress. Only from the EU side position papers have been available which set out and describe the EU's approach on topics in TTIP negotiations (European Commission, 2015a). Given that recently the European Commission has published textual proposals - initial proposals for legal texts - on some topics in TTIP, these documents (European Commission, 2015b) will be examined as well. In addition, a leaked paper recently being published by Greenpeace (2016), which contains not only the text proposal of the EU but also of the U.S., will be used for analysis.

The paper is organised as follows. The first section of the paper discusses the question whether a TTIP agreement in the Electronic Communications sector is desirable. In doing

so various forms of regulatory convergence are briefly presented, followed by a description of market characteristics of Electronic Communications services, aspects of trade liberalisation of these markets and corresponding regulatory approaches in the EU and the U.S. In the second section, the various structural elements of TTIP related to Electronic Communications markets are analyzed. It will be asked to what extent they touch regulations in various areas. Given that there are two draft texts, one of the EU and one of the U.S. it will be examined to what extent they differ from each other. The third section will consider to what extent the text proposals for a TTIP agreement are likely to result in regulatory convergence, how the provisions of the agreement will affect competition on Electronic Communications markets and whether they may undermine other public policy goals such as consumer protection in the EU. The last section offers some conclusions and recommendations.

2. Is a TTIP agreement in the Electronic Communications sector desirable?

2.1 Approaches to regulatory convergence

The objective of facilitating trade in Electronic Communications services requires the removal of non-tariff barriers to trade (NTBs). In the Electronic Communications sector such NTBs often result from regulations applied to Electronic Communications markets. A key objective of the envisaged TTIP agreement is therefore to establish detailed rules for the regulation of Electronic Communications markets, fostering also convergence in the regulation of the sector. This can be achieved when parties agree to make their legal systems more similar to each other, i.e. to work towards regulatory harmonization. In doing so, a stated purpose of TTIP is to reduce the costs of firms when meeting the regulatory requirements of the trading partner (Aggarwal et al., 2015). Where legal orders are more similar, trade is facilitated, because business only needs to comply with one set of legal rules.

When discussing how to overcome trade barriers which result from diverging regulations different approaches are possible: Harmonization, mutual recognition and anything in between, such as equivalence.

Harmonization is the most effective tool for avoiding non-tariff barriers to trade, but is often unlikely to be realized. Also this approach is not always desirable given underlying differences in market characteristics and policy objectives such as on the protection of the environment and consumers. A smoother way towards harmonization is to make use of internationally-agreed standards and regulations. Parties are required to base their

regulation on these standards where possible, and to cooperate in relevant fora for developing common regulatory standards. As countries adapt their regulatory systems to these standards, regulations across countries are increasingly harmonized. Critics of regulatory harmonization have voiced concerns about such convergence in TTIP. They argue that harmonization is a vehicle for a “race to the bottom” in levels of consumer protection. At least, the agreement would lead to a general pressure on standards for consumer protection. Moreover, it may result in delays when governments intend to introduce new regulations.¹

An alternative to regulatory harmonization is the mutual recognition of regulations. Under this approach countries mutually accept their regulations as valid in their own legal system, even though the corresponding rules are different. A product that may be legally offered in one country may be offered in the partner country, and vice versa. This is regardless of differences in standards or other regulatory requirements between the two parties. Usually, the basic mechanism of mutual recognition is that each Party designates conformity assessment bodies. A conformity assessment body verifies whether products destined for export to the other Party conform to the latter’s applicable regulation.² Mutual recognition is above all relevant when products are exported across borders. As will be demonstrated below, this is usually not the case for Electronic Communications services. Given that the provision of Electronic Communications services usually requires some form of local presence in the country of destination, regulations of the foreign country apply as well.

When harmonization of relevant regulations is not possible, parties can agree on accepting the other party’s regulations as equivalent to their own. Also, regulatory bodies may agree on procedures such as the process of adopting new regulatory provisions are equivalent in both legal systems (Francois et al., 2015). The approach is based on the assumption that regulatory objectives can be achieved through different means that are equally effective. For this concept to work each party must accept that the regulatory regime of the trading partner pursues very similar objectives.

¹ Another allegation is that TTIP may result in the creation of decision-taking institutions which would bypass parliamentary decision-taking in the EU.

² An example is the US-Canada Regulatory Cooperation Council created in 2011 by the U.S. and Canada (Heynen, 2013). It is aimed at better alignment in regulation, enhancing mutual recognition of regulatory practices and establishing new effective regulations in specific sectors.

Before the likely outcome of the TTIP agreement on Electronic Communications will be examined with regard to regulatory convergence it is necessary to have a closer look at the nature of regulation in Electronic Communications markets.

2.2 Regulatory objectives in telecom markets

It is impossible to completely leave telecommunication to the market since there are reasons for competition failure, namely economies of scale, economies of scope and network externalities. It is for this reason that countries, once they had decided to liberalize their national telecom markets, they have adopted various regulatory rules in view of encouraging competition in the Electronic Communications markets. Amongst others these rules include provisions on the establishment of an independent regulatory authority, licensing, use of scarce resources, access and interconnection and competitive safeguards against the abuse of market power. More specific, regulations in the Electronic Communications sector often concern the conduct of firms after their market entry. Thus, different from other sectors most regulatory rules in the Electronic Communications sector are not aimed at pursuing non-economic policy objectives such as protecting the environment or consumers from health risks. Rather they intend to encourage competitive markets.

Yet, also in the telecom sector there exist regulations with the objective of consumer protection. In view of guaranteeing basic users' interests that would not be guaranteed by market forces, most countries have implemented regulations on the provision of "Universal Services". People in rural areas shall be provided with basic telecommunications of the same quality at the same price as people in municipal regions where economies of scale would allow for cheaper supply. Also, special groups and institutions such as schools, hospitals etc. are sometimes favoured. A turn towards intensified competition would certainly lead to different prices due to varying costs of production and price elasticities of consumption in differently populated areas. Therefore many governments maintain a certain level of universal service in order to meet commensurate demands.

2.3 Trade liberalisation of Electronic Communications markets

As to the supply of services in a foreign country three different modes of supply can be distinguished: a) the cross-border supply of services; b) foreign investment including the establishment of an enterprise abroad, and c) the supply of a service through the temporary stay of natural persons in their territory. As to Electronic Communications services commitments to facilitate trade in these services include above all the

establishment of new firms and foreign direct investment in existing companies (WTO, 2016). Given that Electronic Communications services are provided through networks which are installed in the country where the service is offered rules which allow for the establishment of foreign service providers are a key requirement for effective market access. Enabling such forms of trade requires the application of key trade principles such as market access (commitments not to impose certain kinds of quantitative barriers), national treatment (commitments not to discriminate investors of the other Party), transparency and most favoured nation treatment (commitments to extend to the other Party any more favourable treatment that would be provided to a third party). Yet, commitments to open national markets are not on their own sufficient to assure open market access for telecommunication service in practice. As has been demonstrated above, the parties of an agreement have to establish rules for regulatory principles, providing safeguards against unfair competition and market power.

At the international level multilateral mechanisms for trade facilitation have been established under the roof of the World Trade Organization (WTO). As part of the Marrakesh agreement that resulted from the Uruguay Round in 1995, both the U.S. and the European Union scheduled several WTO commitments to provide market access and national treatment for Electronic Communications services. The Marrakesh agreement includes four key elements as regards Electronic Communications³:

1. A framework agreement which lays down ground-rules for trade in services, together with an institutional framework for applying these rules and negotiating additional market-opening measures,
2. schedules of specific commitments provided by members; in these schedules members make commitments to reduce market access barriers and to treat service suppliers of other members no less favourably than they treat their own service suppliers,
3. a Telecommunications Annex which provides guarantees for reasonable access to and use of public telecommunications, and
4. a "Reference Paper" to be applied on various regulatory principles: competitive safeguards, interconnection, universal service, public availability of licensing criteria, independent regulators and the allocation and use of scarce resources.

³ For a more detailed discussion of the WTO commitments on Telecommunications services, see Fredebeul-Krein and Freytag (1997).

The U.S. and the Member States of the EU already committed themselves to competitive telecom markets before they signed the WTO agreement on Electronic Communications services. The U.S. started deregulating its long distance Electronic Communications market already in the 1980s. With the adoption of the Telecommunications Act of 1996 it also introduced competition on its local Electronic Communications market by removing legal, operational and economic barriers. Following the Telecommunications Act in 1996, the Federal Communications Commission (FCC) issued specific rules on local interconnection, universal services and access charges.⁴ At the same time, in the mid-1990s, the EU passed various liberalisation and harmonisation directives committing its Member states to open national telecommunication markets to competitors by January 1998. Therefore, few additional legislations had to be adopted by the U.S. and the EU to fully implement the commitments made under the WTO agreement (Fredebeul-Krein and Freytag, 1999). In most instances, they have introduced regulations which go beyond those provided for in the Reference Paper of the WTO agreement.

Yet, Electronic Communications markets in the two legal systems are not equally open because different from the EU the U.S. did not grant unlimited market access due to foreign ownership restrictions. In the EU hardly any Member State has foreign ownership restrictions on Electronic Communications markets. The EU requires national treatment for foreign investors in most sectors (including the Electronic Communications sector) and, with few exceptions, EU law requires that any company established under the laws of one Member State must receive national treatment in all other Member States, regardless of the company's ultimate ownership. In contrast, the U.S. still have significant impediments to foreign ownership of U.S. telecommunications carriers (ITU, 2016). According to the Federal Communications Act foreign suppliers of electronic communications services are not allowed to own more than 20% directly, or 25% indirectly, in a U.S. telecommunications carrier unless the regulatory body FCC allows a higher level of ownership. In such case, foreign telecommunications carriers seeking a license in the U.S. and whose foreign ownership held through U.S. corporations exceeds twenty percent must demonstrate that that the foreign ownership is consistent with the public interest based on public interest criteria established by the FCC. If they are successful their applications will not be barred by the twenty percent direct foreign ownership restriction (Greenberg Traurig, 2012). Yet, once a decision by the FCC has been taken in favour of foreign ownership, several Executive Branch departments

⁴ For instance, the FCC reviews interconnection charges under a system of price cap regulation, see Noll, A.M. (1998).

(Department of Justice, the Department of State, the FBI and the Department of Defense) can still review the proposed foreign ownership of U.S. telecommunications facilities for any national security, law enforcement, or public safety concerns.

2.4 Different regulatory regimes on Electronic Communications markets

There are two distinctive regulatory approaches in view of stimulating competition on Electronic Communications markets: 1) Regulation with the objective of encouraging the development of infrastructure competition dimensions, and 2) regulation with the aim network-based service competition.

While in the past, the European regulatory framework has stressed the importance of network infrastructure competition (European Commission, 2008, p. 4), service based competition is still a reality. The reason for this is that in the European Union the so-called 'ladder of investment' model⁵ has been applied after telecom markets were liberalised in the late 1990s. Under this approach, infrastructure-sharing serves as a stepping stone to full facilities-based competition. Yet, while the corresponding regulatory policies have encouraged entrants to move from resale to bitstream access to unbundled local loops access, no incentives were given to make the final step to full facilities-based competition (Bourreau et al., 2010). As a result of this policy neither the incumbent nor new entrants had an incentive to invest in new infrastructure. This is because the terms and conditions of network access (especially on prices) were set in a way that the policy did not stimulate investment in infrastructure (Ware and Dippon, 2010).⁶ In the EU, a particularly prominent role in favour of service competition is taken by the European Commission. For instance, in early 2011 the German regulator BNetzA decided that fibre unbundling can be subject to a more relaxed price control than unbundling of copper loops (BNetzA, 2011). Whereas BNetzA found it sufficient to intervene only ex post in cases of abusive pricing,⁷ the European Commission insisted on applying ex ante price control based on cost orientation (EU-Com, 2011).

In contrast to the EU, the regulatory approach to Electronic Communications markets in

⁵ The main idea of the model is that facilities-based competition can be achieved gradually, as new entrants acquire their own customer base and capital. At the beginning, entrants can be provided with a full access to the incumbent's facilities, however, later they are required to build their own infrastructure elements in order of replicability, or "climb the ladder of investment". See (Cave & Vogelsang, 2003; Cave, 2006).

⁶ If competitors know that the incumbent has to provide its network elements at rates where costs are no longer covered, they are not willing to invest in building their own telecommunications networks.

⁷ The rationale for this decision was that competition from cable networks will prevent Deutsche Telekom from charging excessive rates for access to its newly built fibre loops.

the U.S. has gone the opposite direction over the past decade. For instance, unbundling conditions as to the local loop are subject to commercial negotiations. Operators have always been able to voluntarily decide whether they offer unbundled access to their networks, or not (Sutherland 2007).⁸ Also, there is no unbundling obligation for fibre, which in return give incentives to operators to upgrade their local networks (Ovum 2012). As a result of this regulatory regime facilities-based competition is today a reality throughout the U.S. Given competition in the supply of network facilities in the U.S. market there is less need for the regulation of network access. Service providers have the choice of network operators and network operators can no longer control essential facilities and therefore abuse potential market power, for instance by charging prohibitive network access rates from its competitors. Accordingly, the US Federal Communications Commission (FCC) has increasingly pursued a deregulatory approach (such as lifting of infrastructure-sharing obligations) in recent years, further stimulating the deployment of high-speed broadband networks.

As a result of the diverging regulatory approaches in the EU and the U.S. competition in broadband networks is very different in the two regions. The broadband telecom market in the U.S. has shown significant growth in recent years. Broadband household penetration (based on Next Generation Networks (NGNs) capable of providing service of 30 Mbps) has grown from 73% in 2011 to 85% in 2013 (Yoo, 2014). In contrast, within the EU broadband coverage has increased only from 48% to 62% during this period (Yoo, 2014). The growth of the United States' mature broadband market was due to facilities-based competition. Given the different regulatory regimes in the EU and the U.S. the figures on broadband penetration are no surprise. They are supported by empirical evidence: While facilities-based competition stimulates broadband penetration this is not so clear in the case of service based competition (Hazlett and Caliskan (2008). The empirical finding on the relationship between unbundling regulations and broadband diffusion are heterogeneous. Some studies found out that unbundling results in a more intense service based competition, which is why the overall effect of unbundling on broadband diffusion can be positive (Distapo et al., 2008). Other empirical studies question the stimulation of competition via mandatory unbundling (Hausman and Sidak, 2004; and Wallsten, 2006).⁹

⁸ Although Unbundling was suggested by the Telecommunications Act of 1996, the implementation of a regulatory framework for ULL failed.

⁹ Some empirical studies come to the conclusion that there is a negative relationship between unbundling and investment: The more intense unbundling regulation is, the lower is the investment by both the

To sum up, competition on Electronic Communications market in the U.S. is more developed than in the EU. It is for this reason that regulatory approaches continue to be different in the two legal systems. Given that facilities-based competition has never fully developed in most EU Member States, the former incumbents retain a dominant position in a number of key market segments such as broadband connections. This in return requires tight regulatory control while at the same time the EU must give priority to stimulate investment. In the U.S. less regulation is required due to facilities-based competition. Thus, the US relatively hands-off approach to the conduct of dominant firms contrasts sharply with the EU interventionist approach. Against this background it is neither desirable nor likely that a TTIP agreement will result in full harmonisation of regulatory rules for Electronic Communications markets.

Yet, given the need of suppliers of Electronic Communications services to invest and/or establish a subsidiary abroad, transnational rules are required which guarantee market access. As of today, EU companies offering Electronic Communications services cannot compete on the same terms in the United States as US firms in the EU. While U.S. companies have unlimited market access to the EU Electronic Communications sector, this is not the same for EU companies seeking market access to the U.S. The rules on foreign ownership present considerable barriers for foreign-owned EU firms wishing to invest in U.S. Electronic Communications infrastructure and to provide Electronic Communications services. The criteria set up with regard to “public interest” are broad and unclear. Therefore, they leave too much discretion with the FCC. Reserving the right to deny a license does not provide applicants with the certainty they desire. Moreover, foreign carriers from the EU seeking to enter the US market are subject to challenges by other government bodies, which in return do create further market access barriers.

It is therefore desirable to have a TTIP agreement for Electronic Communications services between the EU and the U.S. Moreover, given that many regulations apply to Electronic Communications markets, some regulatory convergence is desirable. The next section examines the proposals being made by the EU and the U.S. for such an agreement.

3. Towards an TTIP agreement on Electronic Communications Services

The above section has demonstrated that ensuring Electronic Communications markets

incumbent and new entrants. See for example Wavermann, et al. (2007) or Wallsten and Hausladen (2009).

being fully open under a competitive market environment requires various trade principles and regulatory rules to be set up. Within the negotiations on TTIP these trade principles and regulatory issues are addressed in two ways: First, the EU and the U.S. negotiate rules that are supposed to be applied to all services. These rules, which refer to all modes of supply, are on important trade principles such as Market Access, National Treatment and Most Favoured Nation Treatment. Second, specific regulatory provisions are negotiated on a sector basis. They lay out key principles for the design of national regulatory rules. As to Electronic Communications Networks and Services these principles include provisions on independence of regulatory authorities, licensing, use of scarce resources, access and interconnection, competitive safeguards and universal service.¹⁰

Subsequently it will be analysed to what extent the regulatory rules proposed by the U.S. and the EU are different and whether these provisions are sufficient for making the market access commitments in the electronic communications sector effective. The analysis will be based on a document released by Greenpeace in early May 2016: A consolidated text on “electronic communications/ telecommunications” produced by the EU and the US (Greenpeace, 2016). The text covers the following issues:

- Scope and Definitions
- Principles to be applied to Regulatory Authorities
- Licences / Authorization to Provide Telecommunication Networks and Services,
- (Allocation and Use of) Scarce Resources,
- Access and Interconnection,
- Competitive Safeguards
- Universal Service and Number Portability,
- Resolution of Electronic Communications Disputes

In addition, the US seeks principles to be applied on Regulatory Flexibility, Review of Regulations, Technological Neutrality, Transparency, Undersea Cables and Landing

¹⁰ The proposal for a Title on “trade in services, investment and e-commerce”, published by the European Commission in July 2015 reflects this structure (European Commission, 2015b). It contains six chapters: Chapter I on general provisions which apply to the entire chapter, including definitions, Chapter II on investment principles such as on market access, national treatment and most favoured nation treatment, Chapter III on principles and obligations that both Parties undertake with respect to the cross-border supply of services, Chapter IV on principles as to the temporary presence of services suppliers abroad, Chapter V on principles applying to the regulatory framework affecting services and investment such as licensing requirements and transparency, and Chapter VI on key principles with a view to promoting e-commerce.

Facilities and Services. The EU, on the other hand, proposes additional rules on Foreign Shareholding.

3.1 Independent regulator

For a regulatory system to be effective in terms of promoting competition in national telecom markets it is of vital importance to have an independent regulator. Without an independent regulatory authority, being able to neutrally monitor and enforce legislation, it will be difficult to enforce competitive telecom markets.

In order to ensure the independence of regulators the EU text stipulates that “Regulatory authorities ... shall be legally distinct and functionally independent from any supplier of electronic communications networks, services and equipment.” Moreover, “... a party that retains ownership or control of providers of electronic communication networks and/or services shall ensure effective structural separation of the regulatory function from activities associated with ownership or control. The U.S. text is slightly distinctive from the EU text by stating that the regulatory authority shall be “... separate from, and not accountable to, any supplier of such services, and that it does not hold a financial interest or maintain an operating or management role in any such supplier.”

Other provisions proposed by the EU on the independence of the regulator are rather general, whereas the provisions proposed by the US are more explicit. Example: While the EU states that “The decisions made and the procedures used by regulators shall be impartial with respect to all market participants.”, the U.S. proposal formulates: “Party shall ensure that the regulatory decisions and procedures of its Electronic Communications regulatory body, including decisions and procedures relating to licensing, interconnection with public telecommunications networks and services, tariffs, and assignment or allocation of spectrum for non-government public Electronic Communications services, are impartial with respect to all market participants.” Moreover, the U.S. text states that “Each Party shall ensure that its Electronic Communications regulatory body does not accord more favorable treatment to a supplier of services in its territory than that accorded to a similar service supplier of the other Party on the basis that the supplier to be receiving more favorable treatment is owned by the central government of the Party.”

On the other hand, the EU is more specific on the power of the regulator: “The regulatory authority shall be sufficiently empowered to regulate the sector, and have adequate financial and human resources to carry out the task assigned to it.” Also, according to the EU text “Regulatory authorities shall have the power to ensure that suppliers of

electronic communications networks and services provide them ... with all the information ... which is necessary to enable the regulatory authorities to carry out their tasks ...". The US text does not explicitly foresee such detailed provisions. It only states that regulators must be given the means (including the ability to impose effective sanctions) to enforce regulatory obligations.

All in all, the text proposals on the regulatory authority are rather similar. Both formulations aim at ensuring the independence of the regulatory body by requiring them to be structurally separated from a ministry which is exercising the ownership function over the telecom operator. Differences refer to the impartiality and the powers of the regulator: The formulations on impartiality show that the US side is more concerned about a possible influence of EU governments owning telecom operators than vice versa. As to the power of the regulator it is the EU side which is more specific. The latter reflects the concern of the EU that the regulator may not be sufficiently empowered to initiate and enforce regulations.

3.2 Licensing/Authorization

In nearly all countries suppliers of Electronic Communications services need a license or at least an authorization for the provision certain Electronic Communications services. Licensing conditions, however, might create barriers to market entry which is why rules need to be set up to minimize such barriers.

According to the EU text on authorization/licensing authorization upon simple notification shall be given priority over licensing. Parties may require a license only for the right of use for radio frequencies and numbers. Thereby the licensing of new entrants into the market for Electronic Communications services is limited to two case. The U.S. does not specify the circumstances under which a license may be required. The EU text further stipulates that "Any administrative costs (and no other costs) shall be imposed on suppliers in an objective, transparent, proportionate, and cost-minimizing manner." This provision is in fact an upper limit for license fees and is positive in the sense that it avoids fees far above costs which would in that case discourage market entry.

In order to make it more difficult for governments to discriminate against foreign (and domestic) competitors, the proposed texts of the EU and the U.S. require all licensing criteria, the period of time required to reach a decision on an application and the terms and conditions of licenses to be made publicly available. If a license is denied, the applicant can request the reasons for denial. While these provisions will guarantee the transparency of licensing procedures, the objective of open and competitive telecom

markets may still be undermined if a country wishes to do so. This is because no provisions are foreseen as to the terms and conditions for Electronic Communications licenses. For instance, by obliging applicants to meet various criteria for the granting of a license, a country can impose undue burdens, particularly on foreign entrants.¹¹ The U.S. formulation mitigates this possible anti-competitive effect by requiring the parties to ensure that, on request, an applicant receives the reasons for the imposition of supplier-specific conditions on a license. Last, while the parties are obliged to take a decision on licensing within a “reasonable period of time”, it is not further specified what is meant by reasonable period. Thus a country can discriminate against foreign suppliers by delaying a decision on issuing licenses.

3.3 (Allocation and Use of) Scarce Resources

The allocation and use of scarce resources covers frequencies and numbers. Similar to licenses also the allocation and use of scarce resources can create market entry barriers. This can be achieved by denying frequencies needed for the provision of Electronic communications services. In that case new operators would not be able to enter a foreign market. Also countries may establish (intransparent) procedures which discriminate when allocating scarce resources. For instance, number portability is crucial for new carriers to have direct access to end-users. If governments do not have any regulatory provisions in force on this issue, competition between different carriers will be restricted. (Armstrong, 1997). Established carriers would be able to impede market entry by new firms because the inability to keep the same telephone number when changing to a dominant carrier’s competitor, is due to additional costs, a disincentive for customers to switch.

Both proposals for a text on the allocation and use of scarce resources require the parties to carry out the procedures in an open (only EU), objective, timely, transparent, nondiscriminatory, and proportionate (only EU) manner. Moreover, both text proposals foresee that the current state of allocated frequency bands shall be made publicly available. Yet, detailed identification of radio spectrum allocated for specific government uses shall not be required, no matter whether or not it has the effect of limiting the number of suppliers of electronic communications services.

Contrary to the EU proposal the U.S. proposal relies more on market forces as becomes

¹¹ A country could establish conditions for granting a license which can be met by domestic firms more easily than by foreign companies (such as the share of R&D spending).

evident when reading the U.S. text: “When making a spectrum allocation for commercial services, each Party shall endeavor to rely on an open and transparent process that considers the overall public interest, including the promotion of competition. Each Party shall endeavor to rely generally on market-based approaches in assigning spectrum for terrestrial commercial telecommunications services.” The EU text does not foresee such a provision.

As to numbers the EU has not proposed any provision whereas the U.S. text foresees that “Each Party shall ensure that Electronic Communications services suppliers of the other Party established” in its territory are afforded access to telephone numbers on a non-discriminatory basis.

As to number portability both text proposals foresee an article stating that “Each Party shall ensure that suppliers of public electronic communications services provide number portability on reasonable terms and conditions.” The U.S. text in addition includes the text passage “to an extent that is technically feasible.

3.4 Access and Interconnection

Another important regulatory issue as regards competitive safeguards are access and interconnection guarantees. They are necessary, in order to allow new market entrants interconnect with the network of established carriers. Since new Electronic Communications providers do not own a nationwide network, they depend upon interconnecting their network with the network of the established carrier. The incumbent, on the other hand, has no incentive to interconnect with its competitors. Therefore, regulations are necessary in order to enable competitors non-discriminatory network access. Otherwise, the established carrier could prevent or at least hamper the market entry of new providers.

On this issue, several provisions are foreseen in the text proposals of both parties: major suppliers are required to provide interconnection under equitable and non-discriminatory terms and conditions, at cost-oriented rates that regard economic feasibility, sufficiently unbundled, at any technically feasible point and in a timely fashion. Furthermore, they are obliged to disclose information on technical standards and to guarantee a quality that they provide for their own services. Also, procedures for interconnection negotiations have to be transparent and major suppliers shall make publicly available either their interconnection agreements or their reference interconnection offers.

Yet, some major issues of interconnection are not addressed. The most important

shortcoming concerns interconnection prices. Since the text proposals do not further specify on which criteria the calculation of interconnection charges have to be based, cost-oriented rates may become difficult to realise in practice. Depending on the method for allocating the costs of interconnection, prices might be above the economic costs of interconnection. New foreign (and domestic) entrants would then be discriminated. In order to prevent this, it would be necessary to set up more specific pricing (and costing) guidelines for access to monopolistic bottlenecks areas such as the local network.¹² A further weakness is, that no reference is made as to which network components have to be sufficiently unbundled. Conflicts might arise with interpreting the term “sufficiently”. Given that a major supplier has more bargaining power than potential newcomers he may enforce inefficient terms for the provision of interconnection to rivals.

3.5 Competitive safeguards

Given that due to economic characteristics national Electronic Communications markets of most EU countries (and – to a lesser extent - also the U.S.) continue to be characterised by dominant operators with market power, they may restrict competition on the expense of other suppliers and of consumers. To prevent anti-competitive behaviour the negotiation text of TTIP foresees (an) Article(s) on competitive safeguards. The provisions aim at committing the parties to provide effective safeguards against unfair competition. The proposed text of both parties foresees that the Parties shall introduce or maintain appropriate measures for the purpose of preventing suppliers alone or together are a major supplier from engaging in or continuing anticompetitive practices. Examples of anti-competitive practices are (a) cross-subsidisation such as using revenues from monopoly services to undercut prices of competitors on liberalised markets for services, (b) using information obtained from competitors with anti-competitive results, such as through interconnection negotiations, with anti-competitive results, and (c) not making available, on a timely basis, to suppliers of public Electronic Communications services, technical information about essential facilities and commercially relevant information necessary for them to provide services.

The U.S. text is distinctive on three important issues:

- First, the provisions shall only apply when the suppliers of public Electronic Communications services is a „major supplier in its territory“. This is important

¹² One such rule should be, that the parties are required to calculate interconnection prices according to forward looking long-run incremental costs.

because if the underlying definition of a major supplier was not limited to a “domestic” supplier, governments would be able to impede market entry by foreign operators being a major suppliers in their home country. For instance, a country could deny market entry by foreign (major) suppliers of public Electronic Communications services based on competition grounds. Such competitive safeguard measures would have a strong protectionist drift endangering the market access commitments of the parties. Given that such action is often driven by successful lobbying of domestic firms, governments may pass such legislation.

- Second, the U.S. suggest additional provisions, requiring each Party to ensure “that a major supplier in its territory accords suppliers of public Electronic Communications services of the other Party treatment no less favorable than such major supplier accords in like circumstances to its subsidiaries, its affiliates, or non-affiliated service suppliers regarding (a) the availability, provisioning, rates, or quality of like public Electronic Communications services; and (b) the availability of technical interfaces necessary for interconnection.” Thus by being more specific as to how to ensure the principle of national treatment these provisions would provide more clarity.
- Third, the U.S. proposes two additional articles on a) the resale of public Electronic Communications services and b) on the provision of leased circuits services. Both services are of particular importance for new suppliers of public Electronic Communications services. Provisions shall be adopted by both Parties that terms and conditions for the provision of these services are non-discriminatory. In addition as to leased circuits services rules shall ensure that they are offered at capacity-based and cost-oriented prices.

The more specific provisions on competitive safeguards proposed by U.S. are more appropriate to effectively prevent anti-competitive practices by domestic suppliers with market power. In the absence of detailed regulatory provisions on competition safeguards, service providers with market power will be able to continue with anti-competitive practices. Market access for foreign (and domestic) firms will then be more difficult.

3.6 Universal service

By establishing a universal service policy in the Electronic Communications sector governments pursue social, regional and other non-economic policy objectives. In doing so, governments can create barriers to market entry by requiring comprehensive universal service obligations such as on the maximum set of elements comprising

universal services, the (calculation of) costs and prices for the services or on how to determine the universal service provider.

While the proposed U.S. text is rather short with respect to the provision of Universal Services (“Each Party shall administer any universal service obligation that it maintains in a transparent, non-discriminatory, and competitively neutral manner, and shall ensure that its universal service obligation is not more burdensome than necessary for the kind of universal service that it has defined.”), the EU is more specific on the issue: The proposed text not only explicitly recognizes the right of each party to “define the kind of universal service obligations it wishes to maintain” but it also states that “such obligations will not be regarded per se as anti-competitive...” (parties are only required to do so in a “proportionate, transparent, objective, and non-discriminatory way”). Furthermore, the text foresees the option to “compensate the supplier(s)” of Universal Services. The difference between the two text proposals is that the EU puts much more emphasis on the right of countries to pursue policy goals of public interest, which in the case of Electronic Communications markets covers the right to establish a Universal Service policy.

In contrast, the U.S. is more concerned about ensuring competitive markets. While the EU recognizes that any obligations related to the provision of Universal Services “shall be “neutral with respect to competition”, the U.S. goes one step further by requiring that obligations are not “more burdensome than necessary”. From a competition perspective the danger of a universal service policy is that rules may be established which in practice do discriminate against foreign (and domestic) market entrants, i.e. when calculating the costs of the universal service provision or to when developing precise procedures by which such costs are measured. An overcompensation for the provision of universal services would be to the detriment of those having to pay for it.

3.7 Dispute Settlement

As to the resolution of electronic communications disputes the proposed text of the EU foresees that the regulatory authority concerned shall issue a binding decision to resolve the dispute in the shortest possible timeframe and in any case within four months. The decision of the regulator shall be made available to the public, while respecting the requirements of business confidentiality. While the U.S. text also foresees a dispute settlement mechanism according to which a national regulatory authority can impose an agreement on the parties, it does not specify any time frame for the decision of the regulator. Different from the EU, the U.S. is much more concerned about the rights of

suppliers. The proposed text states that “each Party shall ensure that enterprises may have recourse to a Electronic Communications regulatory body or other relevant body of the Party to resolve disputes.” and “...if a Electronic Communications regulatory body declines to initiate any action on a request to resolve a dispute, it shall, upon request, provide a written explanation for its decision within a reasonable period of time.” Moreover, any enterprise whose legally protected interests are adversely affected by a determination or decision of the Party's Electronic Communications regulatory body may

- petition the body to reconsider that determination or decision,
- obtain review of the determination or decision by an impartial and independent judicial authority of the Party, and
- challenge the regulation a such.

3.8 Transparency

The principle of transparency is a key element not only for promoting stability and predictability of trade between countries but also in facilitating cross-border trade in services. By imposing transparency requirements on national regulators, countries are forced to disclose potential barriers of market access. Thus comprehensive transparency obligations in TTIP would have a disciplinary effect on the U.S. and EU member states. Transparency rules in trade have two dimensions: 1) the publication of all relevant laws and regulations and 2) the publication (and consultation) of intended regulations. As to Electronic Communications the disclosure of regulatory information refers to varies subjects: regulatory bodies, tariffs, access to distribution channels and information networks, technical interface requirements and requirements for notification, registration and the recognition of foreign service suppliers. As long as information on these issues must not be published, countries can impede market entry of foreign carriers.

In the Chapter on Electronic Communications services the U.S. proposes an Article X.8 on transparency with rules specifying conditions to be met 1) when a regulatory body seeks input for a regulatory proposal and 2) as to the publication of regulatory provisions related to public Electronic Communications services. The publication of new electronic communications regulations is already international standard. For instance, GATS article III requires the publication of all relevant laws and regulations. The annex on telecommunications further specifies this obligation: All information on regulatory bodies, tariffs, access to distribution channels and information networks, technical interface requirements and requirements for notification, registration and other forms of recognition foreign service suppliers need to be published.

More contentious is the U.S. proposal on information and consultation rights during legislative procedures. As to this the U.S. text suggests that regulators shall (a) make the proposal public or otherwise available to any interested persons; (b) include an explanation of the purpose of and reasons for the proposal; (c) provide interested persons with adequate public notice of the ability to comment and reasonable opportunity for such comment; (d) to the extent practicable, make publicly available all relevant comments filed with it; and (e) respond to all significant and relevant issues raised in comments filed, in the course of issuance of the final regulation. Advocates of such rules on the notification of measures claim that they help to eliminate regulatory uncertainty and improve rule making by governments (DIGITALEUROPE and ITI, 2015). Critics respond that while transparency sounds nice, these so called “transparency rules” on consultation and information rights of third parties gives global business companies free rein to lobby the EU when it is making new laws. “Clearly, this system could delay or even water down future EU regulations” (Goyens, 2016). Moreover, “... the proposed rules would make it extremely difficult for the EU (and the U.S.) to issue regulations in future.”

3.9 Foreign ownership

As has been mentioned above, different from the EU the U.S. currently have restrictions in place as to the foreign ownership of Electronic Communications suppliers. To overcome such market access barriers the EU proposes a text passage on the provision of electronic communication services and networks, stating that “no party shall impose joint venture requirements or limit the participation of foreign capital in terms of a maximum percentage limit on foreign shareholding or the total value of individual or aggregate foreign investment.” The U.S. has not proposed any text passage on this issue.

3.10 Undersea Cables and Landing Facilities and Services

Different from the EU the U.S. proposes an Article X.19 on “Undersea Cables and Landing Facilities and Services”. According to the text the parties shall ensure that a supplier operating a submarine cable system and/or controlling cable landing facilities accords other (foreign) operators reasonable and nondiscriminatory access to that submarine cable system and to cable landing facilities (including international leased circuits, backhaul links, and cross-connect links). The EU has not proposed any text passage on these issues.

3.11 Regulatory Flexibility, Regulatory Review and Technological Neutrality

The U.S. proposes three more articles (X.5 on “Regulatory Flexibility”, X.6 on “Review of Regulations” and X.7 on “Technological Neutrality”) which are not foreseen in the EU text proposal.

The article on “Regulatory Flexibility” shall commit the parties to rely on the role of market forces wherever this is possible, especially when market segments are or are likely to be competitive. Parties shall forbear from applying a regulation to a service whenever enforcement of the regulation is not necessary either to prevent unreasonable or discriminatory practices or for the protection of consumers. Moreover, supplier of Electronic Communications services shall be given the opportunity to petition the regulator to forbear from applying a specific regulation. Also, each Party shall require its Electronic Communications regulatory body to adopt a decision granting or denying the petition

As to “Review of Regulations” the U.S. intends to include a clause according to which “Each Party shall require their Electronic Communications regulatory body to a) regularly review all regulations affecting the supply of Electronic Communications services; b) determine after such review whether any such regulation is no longer necessary (due to competition); and c) repeal or modify any such regulation, where appropriate.”

On “Technological Neutrality” the U.S. proposes an Article which is supposed to prohibit government intervention in the choice of technologies for the provision of Electronic Communications services. Mandating the use of a specific technology or standard shall only be allowed under strict conditions (legislation, rulemaking and “if market forces have not achieved, or could not reasonably be expected to achieve, its legitimate public policy objective”).

The proposed rules on regulatory flexibility and review of regulations reflect the skepticism of the U.S. with regard to any form of government interventions into markets. Regulations are considered to be costly and burdensome for business and should therefore – as a matter of principle – be removed whenever possible.

4. Towards regulatory convergence on Electronic Communications markets

It has been mentioned that in the Electronic Communications sector EU and U.S. regulation diverge significantly. Much of the EU regulation that applies to the Electronic Communications sector is stricter than US regulation. For instance, in the EU network operators have to share their networks even when they invest in high-speed broadband,

while in the US such obligation was lifted a decade ago. These differences are at least partially a consequence of different levels of competition in the two markets. Where different regulation is the result of such different market characteristics, it is not desirable that they are removed.

Yet, there is also no need for much concern, that they will be removed by the TTIP chapter on Electronic Communications. When reading the two text proposals one can realize that the envisaged provisions build upon commitments made in previous trade agreements that promote competitive markets, especially the WTO commitments. Many rules laid down in the consolidated text on Electronic Communications services go beyond these multilateral commitments. The principles of most favoured nation treatment, transparency, market access and national treatment as well as the regulatory principles on anti-competitive behaviour, interconnection, licensing, universal service, use of resources and independent regulatory bodies in the proposed TTIP chapter on Electronic Communications services are therefore likely to result in more effective safeguards for market access commitments. This is partly because compared with WTO commitments more detailed regulatory rules such as on access and interconnection are proposed but it is also because most provisions considered in the TTIP negotiations refer in addition to procedures of taking regulatory decisions: The role of national regulatory bodies, consultation rights of third parties (business and consumers) and dispute settlement procedures.

Should it ever be adopted, the regulatory framework set out in the TTIP chapter on Electronic Communications Services will reinforce competition in and liberalisation of the Electronic Communications sector, and the market entry of foreign competitors will give an additional stimulus for competition in national Electronic Communications markets. This holds especially true for EU firms intending to enter the U.S. market. Should the EU text on foreign ownership be adopted, market entry for EU companies will be significantly facilitated. Yet, due to the general nature of the regulatory principles, both the U.S. and the EU will still be able to discriminate against foreign companies without violating the rules of the treaty.

Another result of the analysis is that the importance of regulatory action to achieve public policy objectives, including the protection of consumer interests, will most likely not be undermined. TTIP provisions will not affect the ultimate sovereign right of either party to regulate in pursuit of its public policy objectives. It is not likely that it will be used as a means of lowering the levels of protection provided by either party. Evidence on this is manifold:

- On spectrum each Party retains the right not to provide detailed identification of frequencies allocated or assigned for specific government uses.
- As to market entry both parties agreed that they retain the right to require a license (for the use for radio frequencies and numbers (i.e. in order to avoid harmful interference; ensure technical quality of service; safeguard efficient use of spectrum; or fulfill other objectives of general interest).
- On Universal services each party retains the right to define the kind of universal service obligations it wishes to maintain.

A major difference between the two text proposals is that throughout the text document the U.S. puts more emphasize on the importance of relying on competitive market forces when applying regulatory rules to Electronic Communications markets. On the other hand, the EU is more concerned about the rights of regulators to regulate Electronic Communications markets. On some issues (technological neutrality, access to submarine cables and landing facilities) the proposed U.S. text goes beyond the EU text. This reflects the concern of the U.S. that regulations may create unnecessary obstacles to trade, i.e. by denying access to facilities required for the provision of services.

The negotiating parties recognize that the convergence will not lead to a (full) harmonization of regulations. Rather the norm, also after TTIP negotiations will have been concluded successfully, will be mutual recognition of different regulatory regimes. Given that the regulatory objectives and enforcement can be considered to be equivalent in terms of outcome sought, the regulatory regimes in these two legal systems are “equivalent enough” to be accepted with different regulations in place. Thus, while a TTIP agreement on Electronic Communications services will most likely bring some regulatory convergence between the two legal systems, any such agreement will be far away from regulatory harmonization. The regulatory principles of both text proposals are still rather general and will therefore not achieve full convergence. Different regulations being the optimal policy response in different market settings will continue to exist.

Another reason why regulatory harmonization is rather unlikely is that the Electronic Communications Chapter as such is not about regulatory cooperation between the two trading partners. Neither does it foresee the creation of a new institution for coordinated EU/U.S. action on regulatory issues nor does it envisage any closer cooperation between political institutions or regulatory bodies when initiating new regulations.

Yet, it might be that EU-internal policy making will be modified to the benefit of business interests and to the detriment of consumer interests. The U.S. proposal on consultation

mechanisms for discussing new regulatory issues, information to be provided to the interested parties with regard to planned and adopted regulation, mechanisms for stakeholder involvement, and the inclusion of competition impacts as part of impact assessments may lead to a situation where business interests become more visible in the EU policy making proposal.¹³

5. Conclusion

An agreement on principles to be applied for the regulation of Electronic Communications markets is less controversial than in other sectors. This is because regulatory regimes in the EU and the U.S. are already proximate and on both sides there is a high level political commitment with regard to competitive Electronic Communications markets. The Electronic Communications chapter of TTIP is almost entirely about the liberalization of the Electronic Communications sector. To make competitive market access and non-discriminatory national treatment become reality an agreement has to deal with regulatory aspects in telecommunication and it is for this reason that most of the provisions relate to regulatory principles such as access and interconnection. It is very unlikely that such regulatory principles for the Electronic Communications sector are a vehicle for a race to the bottom in levels of protection. Against this background there are several reasons to have a bilateral trade agreement for the Electronic Communications sector:

First, the rules envisaged by the two parties in the TTIP chapter on Electronic Communications may result in a reduction and elimination of unnecessary regulatory barriers on electronic communications markets, thereby providing some benefit to the parties. For instance, the text proposal of the EU on foreign ownership intends to tackle barriers that EU businesses face in the Electronic Communications sectors, in particular limits on how much an EU shareholder can own of a U.S. company.

Second, and more important than this positive effects on bilateral trade is that beyond any potential economic benefits the regulatory rules agreed between the two parties could evolve over time into multilateral regulatory standards. An agreement between the EU and the U.S., economically the two most powerful actors in the world, will more or less force other countries to adopt these regulatory standards (Lester and Barbee, 2013). The new rules once established offer a unique chance to give new momentum to the

¹³ Empirical studies for the EU suggest that business groups have better access to the Commission than other interest groups Coen (2007). Civil society organizations often simply lack the capacities to follow decision-making in multiple international fora.

adoption of more detailed international regulations in the area of Electronic Communications. This in return would reduce the risk of other countries resorting to unilateral and purely national solutions, leading to regulatory segmentation that could have an adverse effect on international trade and investment. An agreement between the EU and the US can contribute to such an objective.

Third, public choice reasons make it politically difficult and (partly) undesirable for governments to commit themselves unilaterally to market liberalisation. Instead, from a government's point of view vagueness and intransparency is very attractive. At the same time, obstructing foreign firms entering the domestic markets allows the existing Electronic Communications lobby to earn rents. There is therefore a case for a bilateral agreement on regulatory provision which causes the negotiating parties to credibly and strongly commit themselves to open markets. Having such rules and conditions embodied in a bilateral treaty guarantees that they are not subject to frequent or unforeseeable changes at national level. Stable policy provides a favourable environment for both foreign and domestic investors.

Literature

- Aggarwal, V.K. and S. J. Evenett (2015): Must TTIP-induced regulatory convergence benefit others; in: M.S. Akman, S.J. Evenett and P. Low (eds.) Catalyst? TTIP's impact on the Rest, CEPR Press, pp. 19-26.
- Armstrong, M. (1997): Competition in Telecommunications. Oxford Review of Economic Policy, 13(1), 1997, 65-78.
- BNetzA (2011) Notification 2011-04-05 BNetzA Adopted Measures DE-2011-1177, BK 3g-09/085, Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway, Bonn.
- Bourreau, M., P. Doğan and M. Manant (2010), "A Critical Review of the 'Ladder of Investment' Approach", Telecommunications Policy, Vol. 34, No. 11, 683–696.
- Cave, M. and Vogelsang, I., 2003. How access pricing and entry interact. Telecommunications Policy, Vol. 27, 717-727.
- Cave, M., 2006. Encouraging infrastructure competition via the ladder of investment. Telecommunications Policy, Vol. 30, 223-237.
- Coen, D. (2007): Empirical and Theoretical Studies in EU Lobbying; Journal of European Public Policy 14, No. 3 (2007): pp. 333–345.
- DIGITALEUROPE and ITI (2015): ICT Industry Recommendations for Regulatory Cooperation in the Transatlantic Trade and Investment Partnership,; 2nd February 2015; retrieved from: <https://www.bitkom.org/Publikationen/2015/Positionspapiere/ICT-Industry-Recommendations-for-Regulatory-Cooperation-in-the-Transatlantic-Trade-and-Investment-Partnership/ICT-Industry-position-on-TTIP-Regulatory-Cooperation.pdf>; 04th July 2016.
- Distaso, W, P. Lupi and F. Marcati (2008): Static and dynamic efficiency in the European telecommunications market. The role of regulations in incentives to invest and the ladder of investment. Retrieved from <http://ssrn.com/abstract=1319310>
- European Commission (2008): Draft Commission Recommendation of [...] on regulated access to Next Generation Access Networks (NGA), Commission of the European Communities, C(2008), Brussels.
- European Commission (2011), EC's comments pursuant to Article 7(3) of Directive 2002/21/EC, DE/2011/1177, 24 February 2011, K(2011)1338, SG-Grefe (2011) D/2850, Brussels.
- European Commission (2015a): The Transatlantic Trade and Investment Partnership (TTIP): Towards an EU–US trade deal, An overview and chapter-by-chapter guide in plain English, Belgium.
- European Commission (2015b): Transatlantic Trade and Investment Partnership: Trade in services, investment and e-commerce", retrieved from: http://trade.ec.europa.eu/doclib/docs/2015/july/tradoc_153669.pdf 14th June 2016.
- Francois, J, B Hoekman and D Nelson (2015): TTIP, regulatory diversion and third countries; in: M.S. Akman, S.J. Evenett and P. Low (eds.) Catalyst? TTIP's impact on the Rest, CEPR Press, pp. 19-26.
- Fredebeul-Krein, Markus and Andreas Freytag (1997): Telecommunications and WTO discipline: An assessment of the WTO agreement on telecommunication services; Telecommunications Policy, Vol. 21, No. 6, pp. 477-491.

- Fredebeul-Krein, Markus and Andreas Freytag (1999): The Case for a More Binding WTO Agreement on Regulatory Principles in Telecommunication Markets; Telecommunications Policy, Vol. 23, No. 6, pp. 625-644.
- Goyens, M (2016): Since when is TTIP not a BIG deal? 3rd May 2016; retrieved from: <http://www.beuc.eu/blog/since-when-is-ttip-not-a-big-deal/>; 04th July 2016.
- Greenberg Traurig (2012): FCC simplifies approval process for foreign-owned entities seeking to invest in U.S. telecommunications market; retrieved from: <http://www.lexology.com/library/detail.aspx?g=5c8724af-f7d7-4993-8082-eedc9c12f3b5>; 05th July 2016.
- Greenpeace (2016): Transatlantic Trade and Investment Partnership (TTIP), Chapter [], Consolidated Proposed Electronic Communications / Telecommunications Text; retrieved from: <https://wikileaks.org/ttip/Electronic-Communications/Electronic-Communications.pdf> 14th June 2016.
- Hausman, J. And J. Sidak (2004): Did mandatory unbundling achieve it's purpose? Empirical evidence from five countries. Working paper 04.-40. Cambridge, MA; MIT Department of Economics.
- Hazlett, T. and A. Caliskan (2008): Natural experiments in US broadband penetration; Law and Economic Research Paper Series, 08-04. Washington D.C.; George Mason University.
- Heynen, J. (2013): International Regulatory Co-Operation: Case Studies, Vol. 2, The Canada-U.S. Regulatory Cooperation Council. Paris: OECD, 2013. http://www.keepeek.com/Digital-Asset-Management/oecd/governance/international-regulatoryco-operation-case-studies-vol-2/the-canada-u-s-regulatory-cooperation-council_9789264200500-3-en#page1
- ITU (2016): ITC Regulation Toolkit: Table 3-6: Foreign Telecommunications Ownership Restrictions in Selected Countries; retrieved from: <http://www.ictregulationtoolkit.org/en/toolkit/notes/PracticeNote/2551>; 05th July 2016.
- Lester, S. and I. Barbee. (2013): The Challenge of Cooperation: Regulatory Trade Barriers in the Transatlantic Trade and Investment Partnership. Journal of International Economic Law, Vol. 16, No. 4, pp. 847–867.
- Noll, A.M. (1998): The Costs of Competition. FCC Telecommunication Orders of 1997. Telecommunications Policy, 1998, 22(1), pp. 47-61.
- Ovum (2012): US - Country Regulation Overview, James Robinson, April 2012.
- Sutherland, E. (2007). Unbundling local loops: global experiences, LINK Centre.
- Ware, H and C.M. Dippon (2010): Wholesale unbundling and intermodal competition; Telecommunications Policy, Vol. 34, 1-2, Feb - Mar 2010, pp. 54–64.
- Wallsten, S. (2006): Broadband and unbundling regulations in OECD countries. Working paper 06-16, Washington, D.C.; AEI-Brookings Joint Center for Regulatory Studies.
- Wallsten, S. and S. Hausladen (2009): Net neutrality, unbundling and their effects on international investment in next-generation tnetworks; Review of Network Economics, Vol. 8, 1, pp. 90-112.
- Wavermann, L., M. Meschi, B. Reillier and K. Dasgupta (2007): Access regulation and infrastructure investment in the telecommunications sector: An empirical investigation, London: Law and Economics Consulting Group with the support of ETNO.

WTO (2016) Telecommunications Services; retrieved from:
https://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_e.htm 07th July
2016.

Yoo, C. S. (2014): "US vs. European Broadband Deployment: What Do the Data Say?",
Institute for Law and Economics Research Paper No. 14-35, University of
Pennsylvania, Philadelphia, PA.