etno European Telecommunications Network Operators' Association

December 3, 2009

EX PARTE PRESENTATION

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

RE: GN Docket No. 09-51, A National Broadband Plan for Our Future; GN Docket No. 09-47, International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act; GN Docket No. 09-137, Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion

Dear Ms. Dortch:

In accordance with the Commission's rules, this letter and attachment are being filed electronically with your office for inclusion in the public record. Please call me if you have any questions.

Sincerely,

Michael Bartholomew
ETNO Director

Position paper

ETNO Reflection Document with COMMENTS - In the Matter of Broadband Study Conducted by the Berkman Center for Internet and Society – NBP Public Notice #13

December 2009

Executive Summary

- The European Telecommunications Network Operators' Association (ETNO)[1] believes that a robust empirical approach – whether qualitative or quantitative – is required, if independent research and analysis are to be used for policy advice;
- In our non-exhaustive review of the qualitative country case studies in the draft report, "Next Generation Connectivity: A Review of Broadband Internet Transitions and Policy from Around the World"[2] (the "Berkman study"), ETNO finds numerous factual errors, inaccuracies and inconsistencies;
- In the following, ETNO would like to highlight some of these shortcomings, which call into question the quality and objectivity of the empirical work conducted, and the empirical foundation for the study's main regulatory findings on 'open access' policies;
- In doing so, we wish to support the objective of the Federal Communications Commission (FCC) for "enlightened, data-driven decision-making"[3].

1 ETNO's 42 member companies from 36 European countries represent a significant part of total telecommunications activity in Europe. They account for an aggregate annual turnover of more than €270 billion, employ over one million people across Europe and account for more 70% of total sector investment. ETNO companies are the main drivers of broadband and are committed to its continual growth in Europe.

2 http://www.fcc.gov/stage/pdf/Berkman_Center_Broadband_Study_13Oct09.pdf.

3 http://www.fcc.gov/Daily_Releases/Daily_Business/2009/db0714/DOC-291986A1.pdf.

Introduction [i]

In July 2009, the FCC engaged the Berkman Center for Internet and Society at Harvard University to "conduct an independent expert review of existing literature and studies about broadband deployment and usage throughout the world."[4] FCC Chairman Julius Genachowski hoped that the review would "lay the foundation for enlightened, data-driven decision-making" and, in particular, for the FCC's "National Broadband Plan" to be published in February 2009. A draft report was published for public comment by the FCC in October 2009.

Based on ETNO members' strong local presence in all European markets – as both historically incumbent operators in their domestic markets and market entrants in neighbouring markets, we are well-placed to provide public comment on the Berkman study. ETNO, however, is limiting its comments to responding to Question 3, "How accurately and comprehensively does the study summarize the broadband experiences of other countries?" We also are limiting our treatment to selected critiques of the European case studies within the study. In spite of this narrow focus, we believe that our comment and concerns are sufficient to call into question the quality and objectivity of the empirical work conducted.

Following some general remarks, we then provide critiques of selected country cases and overviews in the study based on input from ETNO member companies.

General remarks

The bulk of the Berkman study, Parts 4-6, reviews the core policies and practices of other countries and assesses whether one can conclude that one or another policy intervention contributed to a country's broadband performance.

Incomplete treatment of key research question

To begin, the study identifies two competing theories motivating the policy regimes in the European Union and the United States respectively:

[4] *Ibid*.

- "The theory underlying open access is that the more competitive consumer broadband markets that emerge from this more competitive environment will deliver higher capacity, at lower prices, to more of the population."
- "The competing theory . . . is that forcing incumbents to lease their network to competitors will undermine that industry's incentives to invest in higher capacity networks to begin with, and without that investment, the desired outcomes will not materialize."

Inexplicably, though, the Berkman study proceeds to 'test' a research hypothesis, or establish causal relationships, linked to the first theory only. Despite major investment in higher capacity networks being essential for "next generation transition" in broadband, the study does not test any hypotheses linked to the competing theory. Thus we find the study to be incomplete and to represent an unacceptable research bias.

Relationship between regulation and infrastructure investment

If the Berkman study had conducted a parallel research and analysis on the competing theory, we expect that the study would find an indication that a policy of forbearance in certain market circumstances has a strong positive impact on investment (e.g., in Switzerland or in the United States – in particular as regards fibre-to-the-home deployment since the withdrawal of unbundling obligations in 2002).

In line with a large base of theoretical literature[5], regulators are faced with an important trade-off. Promoting market entry by means of regulated access might have the desired short-term effect of lower prices and more consumer surplus, but at the same time undermines the incentives of entrants to invest in their own infrastructure thereby compromising on the long-term goal to establish facilities-based competition. For example, Röller *et al* (2008) argue that access regulation has under-delivered to the equivalent of €18.1 billion, 8.4% of total European telecoms investment. Instead of new entrants committing to their own infrastructure investment, in the main service-based competition by new entrants over the incumbent's infrastructure was achieved by access regulation, which led to lower

5 For example: Valletti, T., "The Theory of Access Pricing and Its Linkage with Investment Incentives, Telecommunications Policy, 27(10-11), pp.659-75, 2003; Hausman, J. and G. Sidak, "Did Mandatory Unbundling Achieve Its Purpose? Empirical Evidence from Five Countries," Journal of Competition Law and Economics (1), 173-245, 2005; Waverman, L., Meschi, M., Reillier, B., & K. Dasgupta, "Access Regulation and Infrastructure Investment in the Telecommunications Sector: An Empirical Investigation,"
London: Law and Economics Consulting Group with the support of ETNO, 2007; Röller, L., Friederiszick, H. and M. Grajek, "Analysing the Relationship Between Regulation and Investment in the Telecom Sector," ESMT Working Paper, 2008; Röller, L. And M. Grajek, "Regulation and Investment in Network Industries: Evidence from European Telecoms," ESMT Working Paper, 2009.

prices and greater choice of providers only in the shorter term (e.g., Belgium, Ireland, and Poland)[6].

Testing relationship between broadband performance and policy

To follow are remarks about the qualitative empirical analysis conducted within the Berkman study.

In several of the critiques of country case studies to follow, we present factual errors as regards the study's assessment of the regulatory situation in those countries. Correcting inaccuracies in the history of unbundling in these countries, however, should not be interpreted as support for such unbundling policies.[7]

Fixed-line broadband penetration data

Whatever the relationship between rankings and policy, we maintain that the right way to compare fixed-line broadband connections across countries is to measure connections per household, not per capita. Any estimates based on numbers of wired connections per capita will be misleading because household sizes differ across countries. Because the United States has relatively large households, it will rank low in per capita broadband rankings. As Wallsten highlights in recent articles[8]:

"Because average household sizes differ across countries, when every household in every country is connected to broadband the U.S. will rank 18th among OECD countries and much lower when compared to all countries in the world. Consider, for example, country rankings of the number of landline telephone subscribers per capita. In 2006 (before consumers started cutting their landlines in significant

6 In Ireland, for example, 88.8% of new entrants DSL lines are supplied by availing of bitstream access. See Communications Committee Working Document, "Broadband access in the EU: situation at 1 July 2009," COCOM09-29, 18 November 2009.

7 ETNO's position on the access policies within the European Union's regulatory framework for electronic communications and how it has been implemented by national regulatory authorities (NRAs) can be read in the following Reflection Documents: "ETNO Reflection Document in response to the Commission Recommendation on regulated access to Next Generation Access Networks (NGA)," RD307, July 2009;
"ETNO Reflection Document in response to the Commission Recommendation on regulated access to Next Generation Access Networks (NGA)," RD295, November 2009; "ETNO comments on the ERG draft common position on geographic aspects of market analysis," RD288, August 2008; "ETNO Reflection Document in response to the ERG consultation on best practices in wholesale unbundled access (ULL) and bitstream access (BSA)," RD277, February 2008; "ETNO Reflection Document on ERG consultation on Regulatory Principles of NGA," RD266, June 2007; "ETNO Reflection Document on a functional separation remedy in telecoms," RD265, June 2007; and others at http://www.etno.eu .

8 Wallsten, S., "Understanding International Broadband Comparisons – 2009 Update," Technology Policy Institute Working Paper: Washington, DC (June 2009); Wallsten, S., "Understanding International Broadband Comparisons." Technology Policy Institute Working Paper: Washington, DC. (May 2008).

numbers), the U.S. ranked 45th in the world by this metric, despite 95 percent of all U.S. households having a telephone."

Given the Berkman study's own concern about population-based data[9] and number of other concerns raised, the authors proceed to use OECD and Telegeography population-based data, seemingly out of expedience.

Regarding of Telegeography data, the authors provide no justification for their choice of this commercial research vendor and its "Global Comms 3.0" product, simply calling it "independent market data." The same scrutiny of the OECD (i.e., section 3.3.2 "Critiques of OECD penetration per 100 inhabitants measure") should be given to the Telegeogrpahy Global Comms 3.0. In fact, the strong correlation between the Global Comms 3.0 data and the OECD data implies that, while concerns about the independence of the regulatory authority are addressed, the other biases within the OECD data (population per household, differential reporting of business lines) are shared with the Global Comms 3.0 data.

Explanatory/causal variables

As the Berkman study recognises itself, econometric analysis of the drivers of broadband penetration generally include – and thus control for – a number of variables, such as GDP per capita, urban concentration, education, age, computer penetration, etc., as well as the existence of facilities based competition and unbundling regulations. While such variables were included in the quantitative analyses done in the Berkman study, only the last two are given consideration in the qualitative case studies conducted.

First broadband transition vs. next generation

To the extent that the investment in next generation access networks is qualitatively different from upgrading the current infrastructure of incumbents, ETNO believes that it is not appropriate to attempt to draw conclusions and formulate policy advice from the first generation world to the next-generation one. It should be noted that as of July 1, 2009, FTTH deployment (i.e., homes passed not subscriptions) in the European Union represented only 1.75% of total lines[10].

9 See p.32, for example, "except that it substantially understates penetration in South Korea, slightly overstates penetration in France and Denmark, and substantially overstates penetration in Switzerland."

10 Communications Committee Working Document, "Broadband access in the EU: situation at 1 July 2009," COCOM09-29, 18 November 2009.

Experiences of open access policy in the first generation broadband environment may in addition not be relevant in a next generation connectivity environment for technical and economic reasons: for example, certain forms of open access are likely to be uneconomical to replicate (e.g., fibre unbundling). Moreover, in markets where open access has indeed led to facility-based competitors investing in own, new infrastructures and becoming less dependent on or independent of incumbent wholesale access products (e.g. France, Germany), it would only be logical to shift emphasis from mandated access to infrastructure competition.

The role of public finance

We would like to point out that the private sector is the primary source of investment for the deployment of advanced broadband networks. This applies also to countries, such as the United States, where the government has committed to substantial stimulus packages[11].

Remarks on country case studies

France

There are numerous factual errors and misstatements made in the Study regarding broadband deployment and developments in France. As such, the Study's section regarding France should only be considered in conjunction with these comments and those filed by the French NRA, ARCEP.

Comments filed by ARCEP

Generally, the information provided in the Study regarding the historical deployment of broadband services in France is incorrect. ARCEP addressed those inaccuracies in comments filed in this proceeding. France Telecom agrees with the statements and sequence of events presented by ARCEP in its comments concerning broadband deployment in France prior to 2003.[12]

11 Katz, R., "The Impact of the Broadband Policy Framework on Jobs and the Economy," The Parliament, 293, 2-3, 2009.

12 Comments of ARCEP, GN Dkt. Nos. 09-47, 09-51, 90-137 (dated Nov. 2, 2009) ("ARCEP Comments").

Further, as indicated in the ARCEP Comments, legislative and regulatory work on unbundling started and developed steadily in France in advance of European regulation on unbundling.[13] Contrary to statements contained in the Study, the procedure of infringement by the European Commission against France on unbundling in 2002 had zero material impact on the development of the French market. This proceeding was limited to the issue of sub-loop unbundling, which is a useless remedy for alternate operators.

Further, France Telecom agrees with ARCEP that the period between 2000 and mid-2002 was an extremely active and productive period in the specification of unbundling processes.[14] Considering the complexity of the processes and issues at stake, this period was in fact very short. The work produced during those months allowed for an efficient multi-lateral industrial unbundling process which was delivered on a mass-market scale as early as 2003, when no equivalent process existed at that scale anywhere else in the world.

Additional inaccuracies

There are a number of additional statements made in the Study which are incorrect.

First, the Study states on p. 181, "Broadband penetration rates increased markedly after a shift in the regulatory environment and the implementation of local loop unbundling". This is incorrect. The period 2000-2002 corresponds to the natural progression of consumer acceptance of a new and innovative service such as broadband. As is usual in such a case, the penetration curve follows an "S" curve, with a slow beginning and then a strong acceleration. At the very beginning, consumers always need time to adopt the new service. Furthermore, the acceleration at the end of 2002 benefitted from seasonal effects of Internet sales. There was no specific shift in the regulatory environment which caused this development. Rather, the NRA worked diligently to address one by one all the questions to be solved before an industrial unbundling process could be operational and economically efficient both for France Telecom and for alternate operators.

Second, the Study states on p. 182, "Compared to its European neighbours, France was slow to adopt widespread broadband Internet. In 2001, penetration rates in France stood at about one-third of the overall average for OECD countries." Again, this statement is not correct. France was slow to adopt Internet in general, dial-up as

13 Id. at 3.

14 Id. at 2-3.

well as broadband. This is mainly due to the success of the French model of on-line services, referred to as "Minitel." Minitel was launched in the 80's and was still very successful late into the 90's. Minitel offered a wide scope of on-line services, based on a very cheap and ergonomic terminal, which was a very competitive alternative to Internet services. The lower penetration rates of dial-up Internet services in general led to the slower start of broadband Internet in France. Moreover, the early take-off of broadband in OECD countries in 1999-2000 was mainly due to cable services, which were underdeveloped in France, compared to other OECD countries.

For additional comment citing factual errors and inaccuracies in the qualitative case study for France, see the filing by France Telecom S.A. in Proceeding 09-47 on 16 November 2009[15].

Germany

The Berkman study paints a picture of Germany as a country with an ineffective regulatory regime, a weak regulator, a "recalcitrant" incumbent, new competitors lacking of technological and economical clout and a government stuck with conflicts of interest as stakeholder and NRA. This characterisation of the German telecom market is then compared to the French market, which the study concludes has more effective regulatory policies, resulting in positive market outcomes.

Clearly, this picture painted in the Berkman study does not correspond to the facts reported in the OECD statistics and in many other market studies and analysis. In fact, the German market is one of the most competitive markets which has witnessed significant price drops and incumbent's substantial loss of market share to competitors. Despite of growing usage of telecommunications services, considerably falling prices have caused total market revenue in Germany to decline since 2005. Declining revenues and a regulatory regime lacking sufficient incentives are widely recognised as important factors that delay investments in very high-speed next generation access networks.

In section 4.7, the Berkman study argues that soft regulatory policies have favoured the incumbent and led to poor market performance. Quite to the contrary,

- Germany has experienced strong growth of broadband subscribers (from 10.6 million in 2005 to 24.9 million in 2009[16]).

15 http://fjallfoss.fcc.gov/ecfs2/comment/view?id=6015498868

16 Verband der Anbieter Von Telekommunikations und Mehrwertdiensten (VATM), the German competitive carriers association, 2009.

With approximately 30 broadband subscribers per 100 inhabitants, broadband diffusion in Germany is well developed.

- Germany's growth of broadband subscriber lines over the past three years is unparalleled in Europe. With an additional 4.2 million broadband lines from July 2007 to July 2008 following a rise by 4.8 million lines from July 2006 to July 2007, Germany clearly outranks other major markets in absolute and relative terms.
- With 8.4 million unbundled local loops by the end of 2008, Deutsche Telekom has provided more unbundled local loops than any other incumbent operator in Europe, making Germany the market with the highest 'LLU penetration'[17].
- However, cable upgrade is leading to a fundamental shift in market dynamics. Unlike stated in the Berkman study, in the recent past cable companies have been particularly successful in the German market. In 2009, cable providers were able to acquire 28% of new broadband customers. According to industry experts, cable companies' share of new customer business will go up to 34% in 2010[18]. This surge in infrastructure-based competition by cable has reduced newly added lines by ULL-based competitors, underlining the relative strength of platform competition where it exists.
- The incumbent operator, Deutsche Telekom, has been constantly losing market share over time. Deutsche Telekom's revenues in the German market are declining, whereas competitors' revenues are increasing[19]. In major cities, such as Hamburg or Cologne, Deutsche Telekom's broadband market share is well under 25%;
- Price regulation forces the incumbent to maintain a major spread between wholesale and retail prices, allowing new entrants' to offer 'double play' offers at lower prices than Deutsche Telekom;
- The assertion that broadband connections, e.g. in France, outperform Germany's broadband connections in terms of speed is not supported by statistics provided by www.speedtest.net, a source also cited by the OECD. Thus, the study's assertions that the telecoms market there has outperformed the German market are not supported by key market indicators in this respect either;
- Deutsche Telekom has repeatedly demonstrated its willingness to cooperate with other operators, both fixed and mobile, to further enhance and accelerate the roll-out of high-speed-

17 S. below, graph 1 in chapter on Italy

18 Financial Times Deutschland, 9 November 2009.

19 Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen. (BNetzA), 2009.

broadband. In particular, Deutsche Telekom has launched a cutting-edge VDSL wholesale product, has engaged in various FTTC/FTTB deployment partnerships and has designed offers for access to its passive infrastructure. The study's conclusion that weak regulation in Germany and an obstructive incumbent have slowed down market performance is clearly contradicted by the actual broadband market performance.

Italy

In the document we found some errors in the LLU data and false conclusions on the competitive scenario in Italy regarding the quality of implementation for unbundling and the penetration of broadband accesses.

Despite effective unbundling policies in Italy, the lack of computer adoption has slowed broadband take-up in Italy. This important country-specific factor has not been considered at all in this – or other – case studies.

We comment below on the implementation of local loop unbundling and factors affecting broadband penetration.

Implementation of local loop unbundling

The study seems to bring into question the role and the quality of implementation of local loop unbundling in Italy. For example:

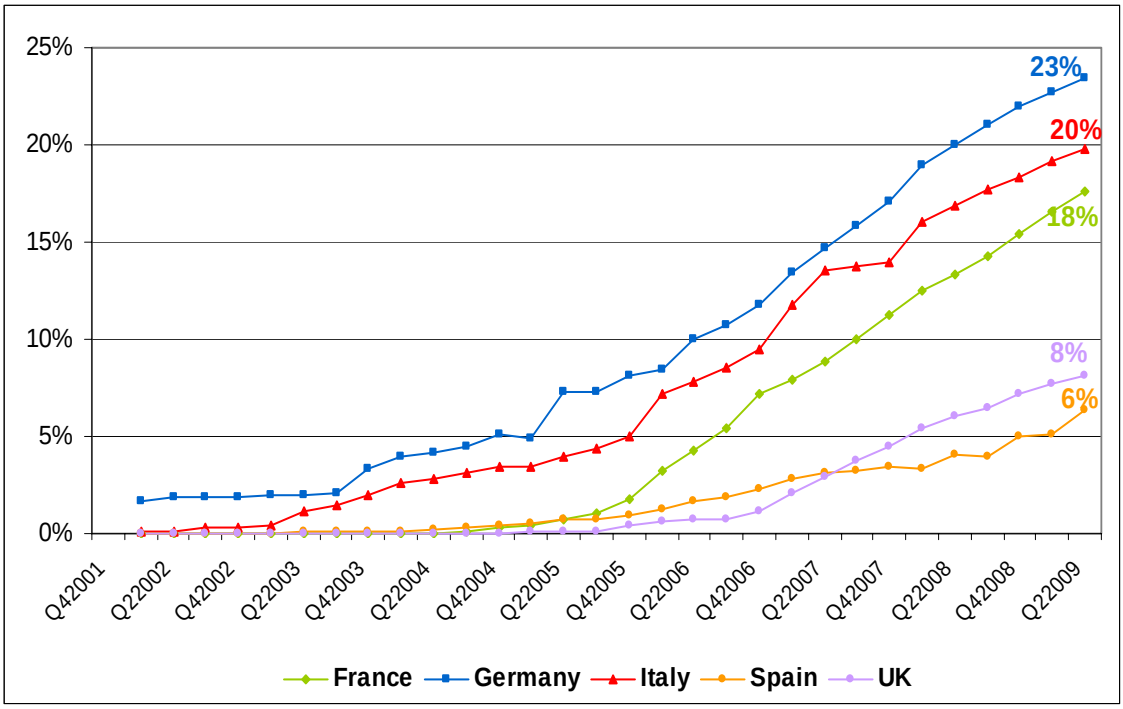
p. 95: *"Italy rounds out the group with an overall more ambiguous case, **where it is unclear that unbundling played much of a role**, where fixed broadband penetration is low, despite low prices, and where mobile broadband seems to have taken off and to a great extent substituted for fixed broadband."* [emphasis added]

p. 150: *"Data is ambiguous about quality of implementation; insufficient data to argue that there was in fact no real LLU uptake"*

The analysis does not take into consideration that Italy is at the highest rank in the use of local loop unbundling (LLU) in Europe. In fact, Italy is at the second place for the penetration of full unbundling and the third place as number of full unbundled lines. As shown in the table below, the full LLU in Italy at the end of 2008 were 3.664 million lines

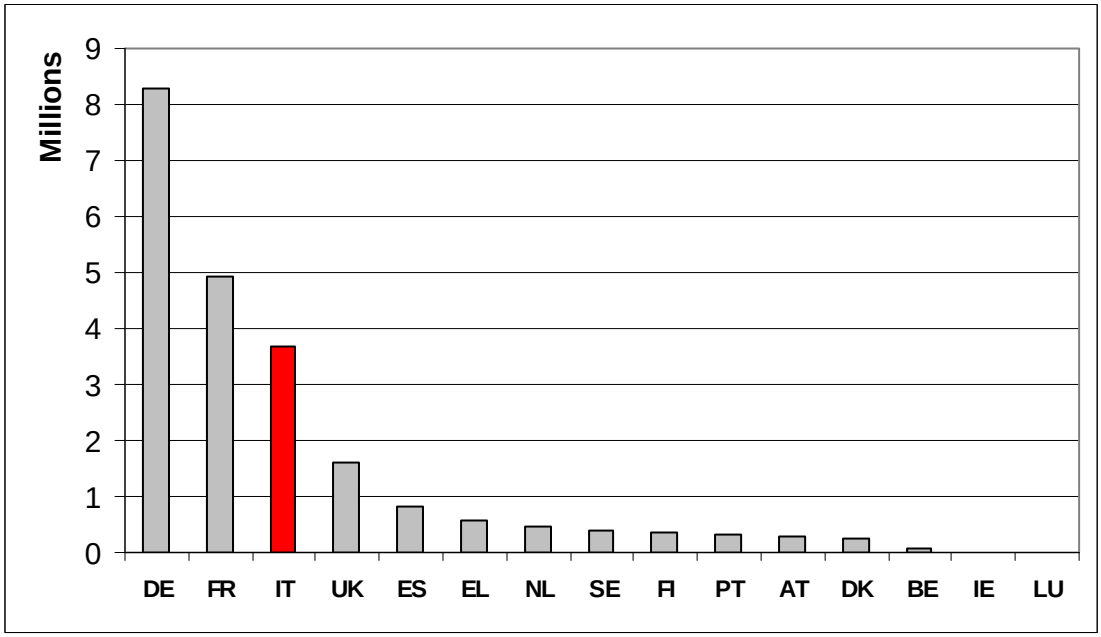
and partially unbundled lines, or shared access, were 220 thousand. In 2009, the full LLU lines have surpassed 4 million.

Penetration of Full LLU – Major European markets



Source: Communications Committee, European Competitive Telecommunications Association (ECTA), European Commission Implementation Reports

LLU lines in EU - 2008



Source: Telecom Italia analysis based on European Commission 14th Implementation Report

Elsewhere, the study reports:

p. 105: *"Italy introduced unbundling formally in 2001, but revamped its structure, improved enforcement, and allowed for partial unbundling with the passage of the Electronic Communications Code in September of 2004, which was Italy's effort to implement the EU Framework Directive and other access directives."*

In fact, the partial unbundling (shared access) was introduced in 2001 together with the full unbundling service -- and not in 2004 as indicated. Moreover, the "Electronic Communications Code" was issued in August 2003 and not in September 2004. There have not been any "revamping" of unbundling but instead a continuous improvement of the wholesale offer of the incumbent coming from the discussions and requests of the Italian alternative operators. The alternative operators started using the unbundling since the beginning; the above diagram "penetration of LLU lines" shows that the take-off of LLU started at the end of 2002, several years before other European countries.

We believe that the following is also incorrect:

> p. 105: *"Wind explicitly emphasizes its reliance on unbundled loops. It accounted for 1.04 million unbundled DSL lines out of the 1.38 million unbundled DSL lines that Telecom Italia sold in 2008."*

Broadband penetration

The study states that the low penetration of broadband access in Italy is caused by fixed-mobile substitution. For example:

Page 62:*"…while Italy has very high levels of mobile phone and mobile broadband penetration. Low prices in Italy may therefore reflect a substitution to mobile broadband coupled, perhaps, with low costs because of urban density, in which case Italy becomes a less interesting target of observation for fixed broadband policy, but remains an interesting target for wireless and the ubiquity aspect of the next generation transition."*

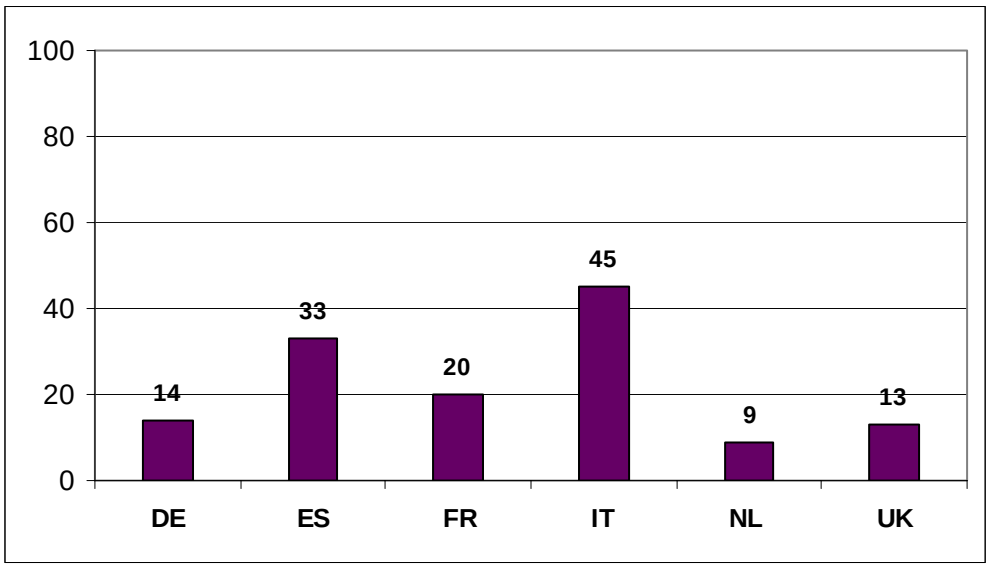
> p. 95: *"Italy rounds out the group with an overall more ambiguous case, where it is unclear that unbundling played much of a role, where fixed broadband penetration is low, despite low prices, and where mobile broadband seems to have taken off and to a great extent substituted for fixed broadband."* [emphasis added]

> p. 106: *"The other interesting story about Italy is on the wireless side, to which we will return in the next section. A major puzzle remains why Italy's levels of penetration are so low despite its low*

prices. One might speculate that mobile broadband is more consistent with Italian culture of urban street life, which would account for both the high uptake of mobile broadband and the low uptake of fixed. This would also be consistent with Spain's similar pattern of low fixed, high mobile, broadband penetration. But such a conclusion, without further research, is mere speculation."

We maintain that fixed-mobile substitution is not the cause. In Italy, the penetration of broadband services is so low because of the low penetration and usage of personal computers. Italy is at the lowest rank in Europe for the use of computers. According to Eurostat, in 2008, 45% of Italian population declared to never have used a computer.

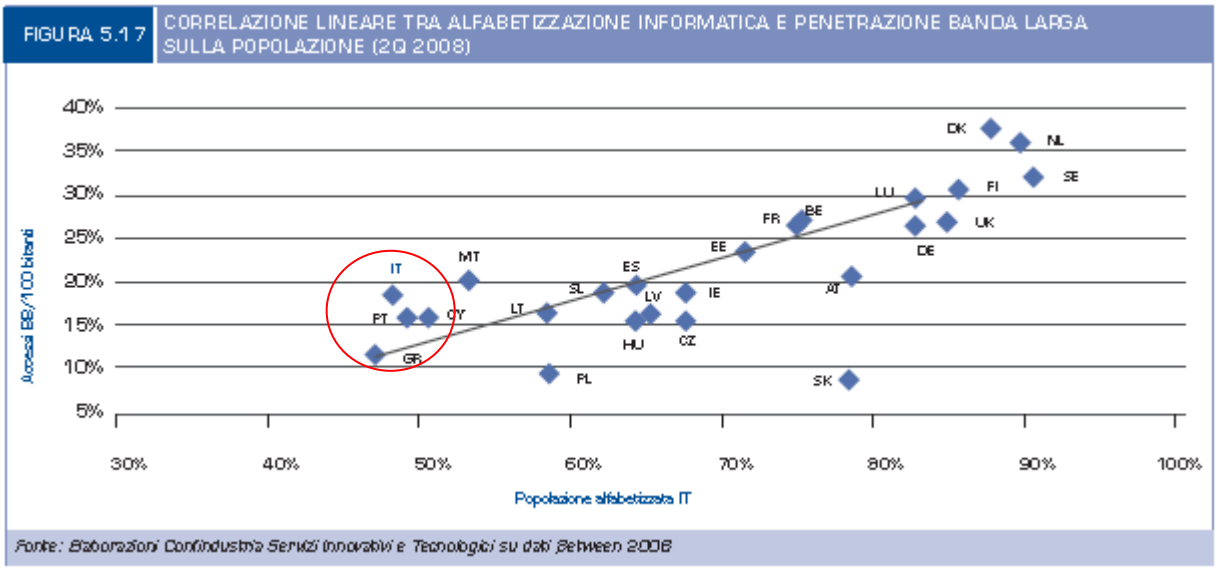
People who have never used a computer (%) - 2008



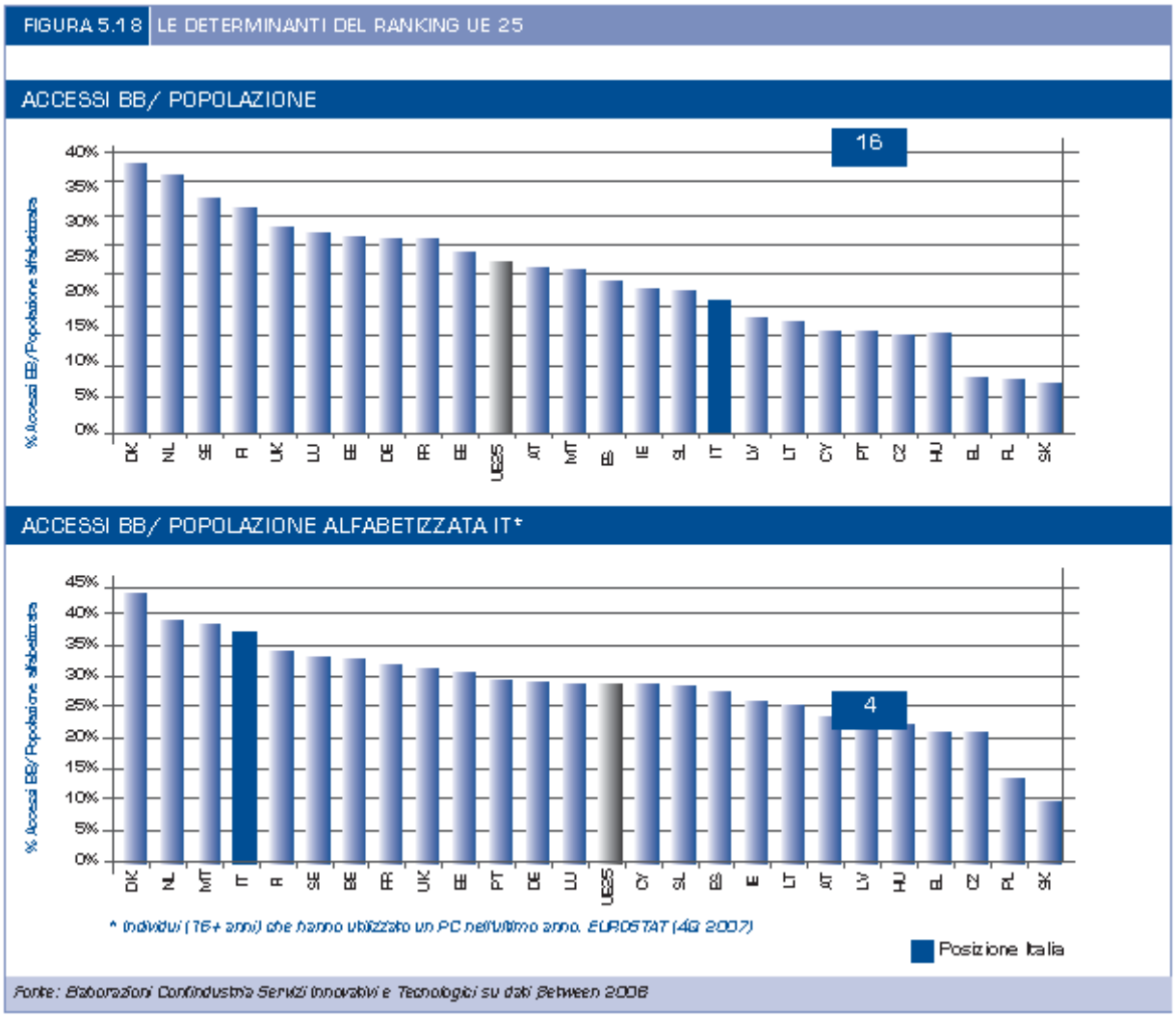
Source: Eurostat

If one compares the information and communications technology (ICT) knowledge and broadband penetration in Europe, one sees that in Italy the broadband penetration is the highest among the countries with similar ICT knowledge.

Correlation between information technology knowledge and broadband penetration



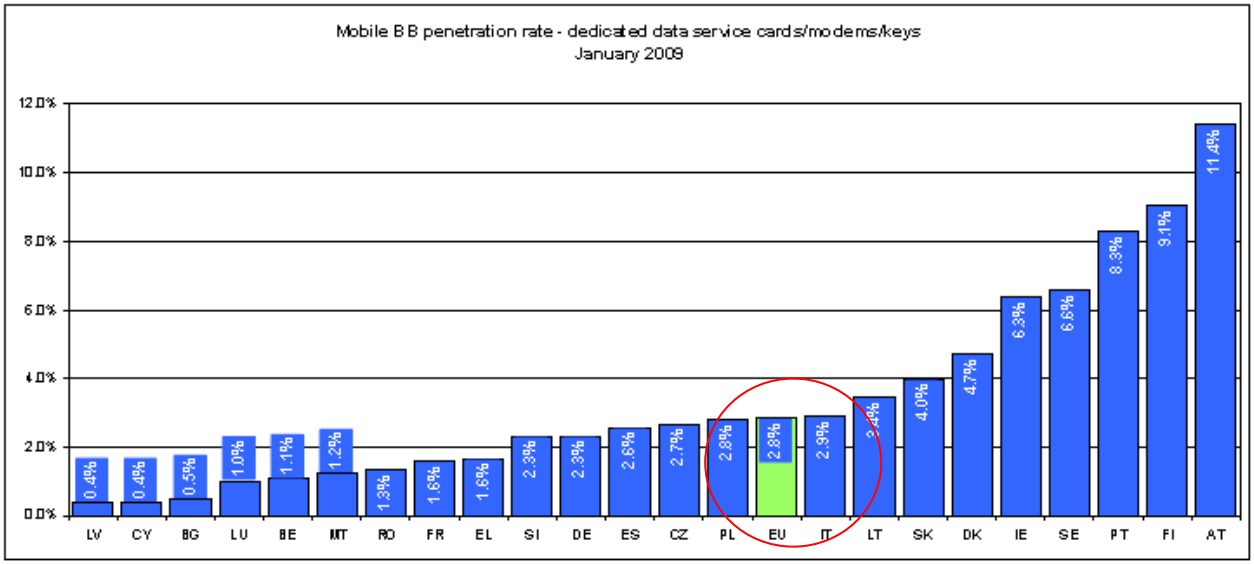
This aspect can be also seen by comparing the penetration of broadband accesses in respect to the whole population and in respect to the population who have used a computer in the last year. While in the first case, Italy is at the 16th place amongst the EU25 (first diagram bellow), in the second case Italy jumps to the 4th place in Europe (second diagram bellow).



Source: "Osservatorio digitale 2.0" - Confindustria and Between (2008)

It is also inaccurate to state that the low penetration of broadband access is due to fixed-mobile substitution. The mobile service which can be considered a substitute of broadband fixed access is the broadband mobile service used through cards and USB keys, or 'dongles.' The penetration of this service in Italy is aligned to the European average.

Figure 111 EU countries by number of dedicated data service cards/modems/keys per 100 population



Source: European Commission 14th Implementation Report (2009)

Moreover, there are two other factors to take into consideration. Firstly, mobile broadband access connections (via cards and USB keys) were at the end of 2008 only 13% of the total broadband connections (fixed and mobile). Secondly, the phenomenon of mobile data card/USB keys is very new (not more than two years). These considerations demonstrate that the mobile broadband connections are complementary and only partially substitutes to fixed broadband. In any case, it is inaccurate to conclude that mobile connections have had negative impact on fixed broadband penetration in Italy.

Norway

Section 4.6.1

This section provides a fair description of the DSL and CATV market in Norway but completely overlooks fibre deployment by alternative operators. In addition to the market players mentioned, several local providers are competing in the broadband market. In particular, local power utilities have built substantial FTTH infrastructure over the last three years, offering triple play services packages (fixed telephony, Internet and TV) and capturing a significant share of the market growth. For example, Lyse, together with its partners, was estimated by Telenor to have 8% of the broadband subscriptions market as at 30 September 2009. The market description of DSL market also omits Nextgentel's (TeliaSonera) acquisition of Tele2's broadband business.

Section 5.4

It is unclear what metric is used to measure 3G penetration. For example, the 21% figure cited for Norway is not recognised (e.g., 25% seems to be the correct value for Norway in the figure on page 40 based on the GlobalComms source); nor are the growth rates cited. The 3G penetration numbers are later used to discuss merits of 3G assignments/roll-out requirements. A current Telenor estimate of share of 3G handsets in population is approximately 50%. As at 30 September 2009 the mobile penetration and number of inhabitants in Norway were 117% (driven to multiple handset/subscription usage) and 4.8 million, respectively. According to report from the Norwegian national regulatory authority for the 1st half of 2009, pure mobile data subscriptions were 381 581, representing a year-on-year growth of 132%.

Sweden

"Country overviews: Sweden"

In the Introduction [p. 213], the study says:

> *"Swedish regulators have intervened at several junctures in broadband markets to enact strong open access rules in the telecommunications sector, starting with the introduction of a local loop unbundling requirement in 2001. This was consolidated further in 2004 with a mandate that TeliaSonera, the incumbent telecommunications company, provide bitstream access for broadband entrants. In 2007, the regulatory authority went a significant step further, forcing TeliaSonera to functionally separate its network and retail internet services divisions. Open access provisions in Sweden now apply both to the copper and high-speed fibre infrastructure."*

A more accurate description of the situation would say that the Swedish NRA has intervened at several junctures in broadband markets to enact strong open access rules in the telecommunications sector, starting with the introduction of a local loop unbundling requirement in 2001 in accordance with EU Regulation of 2000. This was consolidated further in 2004 with a mandate that TeliaSonera, the incumbent telecommunications company, provide bitstream access for broadband entrants. In 2007, the regulatory authority went a significant step further, proposing legislation to be able to oblige TeliaSonera to functionally separate its network and retail services divisions. Such legislation entered into force on 1 July 2008, but has

not been used by the NRA. Open access provisions in Sweden only apply to the copper infrastructure. Thus it is not appropriate for the Berkman study to use the Swedish case as evidence to support its conclusion that *"Transposing the experience of open access regulation from the first broadband transition to next generation connectivity occupies a central role in other nations' plans."*

In the section on "Regulatory Framework," p. 216, the study states:

> *"The 2003 Electronic Communications Act (EkomL) lays out the regulatory structure for all electronic communication networks and services in Sweden, covering both wireline and wireless communications systems. The passage of this act, enacted during a period of rapid growth in broadband, reinforced Sweden's policy commitment to carry out tough regulatory action in order to promote wide-scale broadband internet coverage and adoption."*

An accurate summary would be that the 2003 Electronic Communications Act (EkomL) lays out the regulatory structure for all electronic communication networks and services in Sweden, covering both wireline and wireless communications systems. The passage of this act was the result of a transposition of the 2002 EU Regulatory Framework.

In the section on "Political economy" [p.217], the report states:

> *"TeliaSonera is not alone in benefiting from (former) public ownership: B2 used a strategic partnership with the National Swedish Rail Administration to gain access to the railway communication infrastructure.379 Municipalities and publicly-owned companies have joined forces to build local fibre networks, thereby adding to the picture of a sector heavily influenced not only by regulatory power struggles but also by cooperative public-private partnerships."*

An accurate description would be that Tele2 used a strategic partnership with the National Swedish Rail Administration to gain access to the railway communication infrastructure. Three hundred seventy-nine Municipalities and publicly-owned companies have joined forces to build local fibre networks, thereby adding to the picture of a sector heavily influenced not only by regulatory power struggles but also by cooperative public-private partnerships. Such initiatives have meant an increasing competitive pressure on TeliaSonera. It must also be noted that TeliaSonera never benefited from the remaining public ownership (37.3 %).

In the section on "Broadband strategy" [p.218], the report states:

"The plan calls for the state to take responsibility in organizational, logistical, and technical issues in order to meet the coordination objective."

An accurate description would say that the plan calls for the state to take responsibility in organizational, logistical, and technical issues in order to meet the coordination objective. However, there are no clear indications that the state has taken any measures to this effect within the area of broadband network infrastructures.

In addition one could add that the "Broadband Strategy for Sweden" includes a political goal saying that by 2020 90% of households should have access to a broadband connection of at least 100 Mbit/s. This development should be market driven and no public funding is foreseen.

To date, however, the Swedish NRA has not availed itself of the new legislation, allowing imposing functional separation. It should be noted that TeliaSonera has committed to a policy of equal treatment of external and internal customers to its wholesale products. The company has established a separate subsidiary (Skanova) for its passive network and established an Equality of Access Board with external members to monitor and report on equal treatment issues.

Switzerland

The selective use of Switzerland in its empirical analyses is a major cause of concern with the Berkman study. Switzerland is highlighted in the qualitative analysis. However, on p. 106 the authors explain that Switzerland has been excluded from the data in order to allow certain results. Reducing the already small sample size – and deliberately to affect the results, is a highly questionable practice in quantitative analyses.

Figure 3.4

We challenge the data in Figure 3.4 [p.32]. In end-2007, there were 2.3 million broadband connections in Switzerland. Population was approximately 7.6 million, resulting to a population-based penetration of 31%. The average household size was 2.28 persons in Switzerland's 3.3 million households. This would result in a household broadband

penetration of 71 %. If residential lines alone were considered, the respective figures would be ca. 27% and 62% respectively.

Section 3.4.3

Based on the above concerns, we question the conclusions drawn from the penetration data. The report [p.45] observes,

> *"Switzerland has first quintile performance on the per 100 inhabitants measure and the nomadic access measure but third quintile performance on 3G and per household penetration (although the Swiss per household data is a year older than most other countries in the set, and so understates its performance there, possibly significantly; this exhibits one disadvantage of the per household measure in that it depends on survey techniques that are harder to update as regularly as the subscription data on which the per 100 inhabitants measures, both fixed and mobile, are based)."*

True, the figures are significantly misleading. As mentioned above, the per household data on fixed broadband are not correct. If residential lines alone were considered, this would still lead to better picture and ranking.

"Country overviews: Switzerland"

The Berkman study states [p.221]:

> *"Switzerland has experienced strong results in broadband deployment, despite taking a substantially different approach than other countries that have performed well in this space. Switzerland has relied primarily on inter-platform competition between the incumbent telecommunications company that offers DSL and cable companies. Unlike the majority of its European neighbors, Switzerland has been slow to implement local loop unbundling, formally adopting this policy only in 2007. However, it is difficult to attribute their success solely to a regulatory abstention given the* consistent efforts of the national regulatory authority to implement local loop unbundling since 2003."

In fact, since LLU was foreseen in the law, implementation of the policy has been quite efficient and effective. Compared to its European neighbours, Switzerland has been late as opposed to "slow."

We do not agree that it is "difficult to attribute [Switzerland's broadband penetration] success solely to a regulatory abstention." We think that the ex-post regime, which should be recognised from the beginning of the overview, has contributed a lot to the development of the broadband market. Moreover it has to be said that the tentative of the NRA to regulate the local loop did not have any effects on the broadband market.

The report continues, observing:

> *"The political discourse about broadband over the past two years has centered around three core themes: firstly, the likely effects of local loop unbundling as introduced in 2007; secondly, a possible amendment to the Law on Telecommunications to allow ex-ante regulation and to recast the regulatory*
>
> *framework into one that is technology-neutral; and thirdly, extension of the regulatory power of the Federal Communications Commission (ComCom) to the regulation of fibre networks.*

The possible amendment to the Telecommunications Law will allow "ex-officio" regulation, which is not equivalent to the ex-ante regulation within the EU regulatory framework. It would allow the intervention by the NRA in a limited way concerning access forms where there is a risk of abuse of dominant position.

The report continues:

> *"Switzerland is moving towards an innovative strategy for sharing the costs and risks of deploying the next generation of higher capacity infrastructure for the country, adopting a cooperative approach to deploy fibre directly to homes in Switzerland and to provide subscribers with access to multiple service providers through the same infrastructure."*

The observation is not correct, depending on the definition of "service provider." The multi-fibre strategy allows the ownership of a fibre connection by multiple network operators and, because of their wholesale offers, it also allows the establishment of a multiplicity of service providers. The multi-fibre strategy therefore allows subscribers' access to multiple network operators and services providers.

On p.223, in the section on broadband development, the study notes:

"Although optical fibre connections are not as widespread as in other European countries, there has been much activity in that area recently that illustrates fibre's growth potential. Swisscom already operates a

network with optical fibre lines, although this network usually ends at street cabinets (FTTC, fibre-to-the- cabinet) and doesn't yet extend to homes or small and medium-sized enterprises. However, more than 10 local power utilities—mostly (but not exclusively) owned by municipalities and cantons—have announced plans to invest in fibre-to-the-home (FTTH) networks."

This information is not current. Swisscom has connected 7,800 households, leading to almost 100 thousand households by end-2009. Therefore, Swisscom's deployment has surpassed municipalities in terms of the number of houses connected with FTTH.

Further on p. 223, the study notes:

"In addition to these developments, the federal regulatory authority of the telecommunications industry, ComCom, launched a series of fibre-to-the-home roundtable talks to coordinate plans of potential investors, broadband providers, and other interest groups. By October 2009, the participants of the roundtables had agreed on technical standards to deploy new fibre into buildings, which will make it easy for customers to switch providers and will ensure that different network and service providers can reach customers."

This information is also not current and thus inaccurate. In the meantime, the round table could agree on three different points:

- Uniform home installation, ensuring that the multi-fibre connection permits the choice of multiple network and service providers to end-users. The operators agreed on a single plug connector type for sockets in homes, to save customers the trouble of searching for the correct adapter cable when they switch providers.
- Access to the fibre-optic network for service providers, with participants drawing up recommendations for standardised network access by services.
- Contracts between house owners and fibre-optic network operators, establishing that within a building at least four fibres are to be laid in each dwelling.

These points will be further discussed with a view to adopting a joint recommendation[20]

On p.223, the authors mistakenly states that 3G Mobile AG was formerly owned by Sonera. Its former owner was Telefonica.

20 Cf. http://www.comcom.admin.ch/aktuell/00429/00457/00560/index.html?lang=en&msg-id=29395

On p. 224, the study says:

"WiMAX still plays a marginal role in the broadband market. In 2007, a license was awarded to Inquam Broadband. The provider is expected to launch a mobile WiMAX service. Swisscom decided in 2008 to use satellite connection for universal access services rather than WiMAX."

It should be noted that Swisscom had held a WiMAX concession but returned it to the NRA in September 2009 so that it could be re-assigned.

On p. 225, the study posits:

"Observers argue that the fibre-to-the-home roll-out is somehow linked with the decision taken by Federal Council in 2005, according to which Swisscom is not allowed to make major investments in foreign companies as long as the Swiss government is its majority shareholder."

This premise is false, as it is based on a factually incorrect statement. In fact, Swisscom is allowed to make major investments in foreign companies. The ban of the federal government on foreign investments concerns companies which have a universal service obligation. Evidence of this statement's falsehood is Swisscom's acquisition of Fastweb in 2007.

On p.226, the authors observe:

"Since its amendment in 2007, key elements of the LTC regime include local loop unbundling and an ex-post mechanism to set prices for network access."

The sentence insinuates that the ex-post mechanism has been introduced into the law with the amendment in 2007. In fact, the ex-post regulatory regime has been in force since the beginning of telecom liberalisation in Switzerland in 1998.

On p.228, the study explains:

"On the local level, cities such as Zurich and St. Gallen have built strategic partnerships with local power utilities and broadband service providers to deploy fibre-to-the-home networks."

This information is not current. Swisscom announced co-operation agreements for the roll out of multi-fibre FTTH in Fribourg, St. Gallen, Pfyn, and Lausanne in the course of 2009. This co-operation – and the increased FTTH deployment it implies -- should be mentioned.

[i] BT does not support this Reflection Document.