



## STUDY PROGRAMME

EEIB + ELEA + ECO-EPPA

## ACADEMIC YEAR

2023-2024

## SEMESTER

2

## COURSE TITLE

ECONOMICS OF EU NETWORK INDUSTRIES

## COURSE PROFESSOR

JACQUES PELKMANS

## COURSE Acad. ASSISTANT

Colm LAVELLE

## NATURE OF COURSE

OPTIONAL

## LANGUAGE OF INSTRUCTION

ENGLISH

## ECTS CREDITS

4

## 1. COURSE OBJECTIVES

At the end of this course, the student will have a thorough understanding of the conceptual and practical toolbox encompassing intra-EU cross-border liberalisation, EU competition policy and EU regulation for 6 network industries, highlighting their evolution and the challenges they pose from both an economic and a policy perspective.

The course will equip students with the conceptual framework – economic and regulatory – necessary to understand the role of EU network industries in the EU single market and with up-to-date knowledge of the regulatory tools deployed across them. It will therefore enable them to understand the current and the upcoming policy questions in a crucial part of the EU economy both in terms of its size and, strategically given their ‘input’ function in other sectors, as a key enabler of the well-being of EU citizens and the competitiveness of EU businesses.

## 2. LEARNING OUTCOMES

At the end of this course, the student will be able to:

- Understand and analyse the EU single market for 6 important network industries, sectors with and without major ‘sunk costs’
- Master the interplay between EU (cross-border) liberalisation, EU regulation and EU (as well as Member States’) competition policy, serving the emergence and proper functioning of the single market for network industries



- Appreciate and analyse the basic economics of the (emerging) single markets in
  - (i) **gas & electricity**, and the interaction with climate policies, including the Green Deal
  - (ii) **eCommunications and the digital single market**,
  - (iii) **broadcasting and internet platforms**,
  - (iv) **air transport**,
  - (v) rail, emphasizing **freight rail services**
- Understand the rationales and basic working of quasi-regulatory Agencies at EU level in energy (ACER; and the EU network of infrastructure TSOs for gas [ENTSO-G] and electricity [ENTSO-E]), eComms (BEREC), and the safety Agencies for rail (ERA), air transport (EASA) and maritime services (EMSA)
- Participate in EU economic policy debates on the critical challenges and policy choices in network industries, given lingering barriers in the single market and the progress accomplished in market-based approaches (at first, quite contested)

The **learning outcomes** for this course tie in with the following learning outcomes for the European Economic Studies programme:

For EEIB, ECO-ELEA and ECO-EPPA students

1. Understand the normative assumptions, implications and limitations of economic theory and economic policy making with respect to network industries;
2. Use economic theory to assess the rationale(s) of EU regulation of network industries;
3. Learn how to acquire relevant information in related disciplines (law, political science) insofar as directly useful to appreciate the intricate issues in EU network industries in the single market
4. Has acquired economic knowledge and insights about the leading liberalisation and competition issues as well as regulatory approaches for a proper functioning of the EU single market of network industries

For MATA-ECO students

1. All the learning outcomes 1 – 4 under EEIB, ECO-ELEA and ECO-EPPA, above, also apply to MATA students.
2. When designing and amending the regulatory approach in network industries or details of the liberalisation process as well as of competition issues in these sectors, the EU and US are careful observers of one another, whether in the academic literature, in think-tanks and/or in ELEA-type settings (including courts). In this sense our course is highly relevant for MATA students as much of what is learnt and applicable is likely to be relevant and/or similar in the US as well.

### 3. COURSE CONTENTS

The anticipated contents below is only indicative, and remains subject to change conditional on the EU energy crisis given the Ukrainian war.

The course will have two horizontal sessions (basic economics of NWI; typical competition issues in NWI) and eight sessions for six sectors.



The six network markets which will be dealt with during the course are:

- i. Electronic communications, the internet and the EU digital market (2x);
- ii. Broadcasting and internet platforms (1x);
- iii. Air transport (1x);
- iv. Rail (1x);
- v. Electricity (2x); and
- vi. Gas (1x).

The course will go considerably in-depth into the economic characteristics of network industries, and on how to introduce competition in such sectors at EU level. In different degrees this has now been accomplished in the 6 sectors, following a period of more than 30 years. It will zoom in on the regulatory instruments employed by the Union in all six sectors, and discuss selected competition aspects such as margin squeeze, the theory of access and interconnection, mergers and their timing, and the evolution of the underlying technologies. Cases and examples will be mostly brought in *by the students*, after consultation with Prof Pelkmans, where relevant, as well as with Colm Lavelle [see the separate document “Student presentations, and some suggestions for readings when preparing”].

## 4. TEACHING METHOD

Contact hours: 30 hours.

## 5. FURTHER DETAILS ON THE TEACHING METHOD

The teaching will be done in the form of lectures.

Students are expected to actively participate through presentations of small cases/themes and debate. As noted above, the students will receive some guidance and some literature suggestions [see also below] before the course begins, so that they can find their way and prepare the short presentations on that basis (without investing too much time). See the separate document “Student presentations, and some suggestions for readings when preparing”. For all students, prior reading of the compulsory reading material, before every lecture session, is essential. See below under 6.

## 6. COURSE MATERIAL

The list of compulsory readings reading list is found here. A few recommended readings are indicated as well. Readings recommended for the student presentations are found in a separate document for the students.

### 1. Basic economics of networks and liberalisation in the EU

M. Brons, F. Kalantzis & L. Vergano (2019), Market functioning & Market Integration in EU network industries – telecommunications, energy & transport, *European Economy Discussion Papers* 111, September (DG EcFin) ; [www.ec.europa.eu/info/publications/market-functioning-and-](http://www.ec.europa.eu/info/publications/market-functioning-and-)



[market-integration-eu-network-industries-telecommunications-energy-and-transport\\_en](#) (pp. 11 – 53)

[*recommended*] CERRE study group (2014), Network industries: efficient regulation, affordable & adequate services, June, [www.cerre.eu/sites/cerre/files/140618 CERRE RegulDossIncomEC final](http://www.cerre.eu/sites/cerre/files/140618_CERRE_RegulDossIncomEC_final)

## 2. Typical competition aspects in network markets

Ch. Bender, G. Goetz & B. Pakula (2011), Effective competition : its importance and relevance for network industries, *Intereconomics*, Vol. 46, special forum on 'effective competition'

European Commission, C(2018)2374 of 27 April 2018, Guidelines on market analysis and the assessment of significant market power (based on telecoms), pp. 27

European Commission (2020), Recommendation of 18-12-2020 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation [.....], C(2020) 8750, see [www.ec.europa.eu/digital-single-market/-en/news/commission-updated-recommendation-relevant-markets](http://www.ec.europa.eu/digital-single-market/-en/news/commission-updated-recommendation-relevant-markets) (pp. 9)

## 3. Electronic communications, the internet and the EU Digital Market

R. Feasey (2019), New European Electronic Communications Code interpretation & implementation, *Issue Paper CERRE*, January, [www.cerre.eu/wp-content/uploads/2020/05/190110 CERRE EECC IssuePaper Final compressed 1-1.pdf](http://www.cerre.eu/wp-content/uploads/2020/05/190110_CERRE_EECC_IssuePaper_Final_compressed_1-1.pdf) (11 pp.)

M. Cave, C. Genakos & T. Valletti (2019), The European Framework for regulating telecommunications, a 25-year appraisal, *Review of Industrial Organisation*, Vol. 55, pp. 47-62

M. Bourreau (2021), Cooperation between telecommunications operators for infrastructure deployment, *CERRE Issue Paper*, October, [www.cerre.eu/wp-content/uploads/2021/10/211025 CERRE IP Co-investment-Final.pdf](http://www.cerre.eu/wp-content/uploads/2021/10/211025_CERRE_IP_Co-investment-Final.pdf) (pp. 19)

[*recommended*] F. Grijpink et al (2018), Network sharing and 5 G, from McKinsey & Company telecoms, February, see [www.mckinsey.com/industries/telecommunications/our-insights/network-sharing-and-5g](http://www.mckinsey.com/industries/telecommunications/our-insights/network-sharing-and-5g)

Oxera (2018), Regulating oligopolies in electronic communications markets : supplementary discussion paper, January, go to [www.oxera.com](http://www.oxera.com) [note, this interesting and sophisticated paper is written for Liberty Global, the parent company of Vodafone, Ziggo etc.]

GSMA & Kearney (2022), The internet value chain, May, [www.gsma.com/publicpolicy/wp-content/uploads/2022/05/Internet-Value-Chain-2022.pdf](http://www.gsma.com/publicpolicy/wp-content/uploads/2022/05/Internet-Value-Chain-2022.pdf) ; read pp. 1-10 (of pp. 54)

Telefonica (2022), Merger control : ensuring the competitiveness of European markets, 5 July, together with a very short article of an interview with Verstager, 31 Jan 2023, [see [www.capacitymedia.com](http://www.capacitymedia.com) ] where she argues strongly in favour of a much more consolidated EU telecoms single market, and again together with an article on Oct. 12 2023, on [www.isp.page.news/](http://www.isp.page.news/) by Gregory Adamowicz on "a Digital Networks Act" encouraging EU telecoms "champions" – read also on <https://www.digital-networks-act.com> an explanation.



## 4. Broadcasting and Internet Platforms

[*recommended*] UK House of Commons, Media Ctee (2021), *The future of Public Service Broadcasting*, London, 25 March, [www.committees.parliament.uk/publications/5243/documents/52552/default](http://www.committees.parliament.uk/publications/5243/documents/52552/default) (pp. 53) [although specific to the UK – with its fully publicly funded BBC, without advertising, besides commercial broadcasters - this report shows the predicament of today's broadcasting in a world of internet, platforms and social media, with the policy options].

[*recommended*] Center for American Progress (2021), *How to regulate Tech : a technology policy framework for online services*, *Report*, November, Washington DC, <https://www.americanprogress.org/article/how-to-regulate-tech-a-technology-policy-franeowrk-for-online-services/> [a powerful analysis blending broadcasting and online services and platform issues, with economic, political, legal and other aspects; also US oriented, with large overlaps with debates in the EU]

J. Cremer, Y.de Montjoye & H. Schweitzer (2019), *Competition policy for the digital era*, [report on request of Commissioner Vestager], read **ONLY 'Executive Summary'**, pp. 2 – 11 ; see [www.ec.europa.eu/competition/publications/reports/kd0419345enn.pdf](http://www.ec.europa.eu/competition/publications/reports/kd0419345enn.pdf)

[*recommended*] V. Demary & C. Rusche (2018), *The economics of platforms*, *IW-Analysen* 123, Koeln, <https://www.iwkoeln.de/en/studies/iw-analysen/beitrag/vera-demary-christian-rusche-the-economicsd-of-platforms.html> [a longer study but helpful for a fuller understanding]

J.U. Franck & M. Peitz (2019), *Market definition and market power in the platform economy*, CERRE Report, May, [www.cerre.eu/wp-content/uploads/2020/2020/05/report\\_cerre\\_market\\_power\\_platform\\_economy.pdf](http://www.cerre.eu/wp-content/uploads/2020/2020/05/report_cerre_market_power_platform_economy.pdf) (pp. 93 ; **only read the Exec. Summary (pp. 6-8)**, and the rest only if you have time

[*recommended*] H. Varian (2020), *Seven deadly sins of tech?*, to be published in *Information Economics and Policy*, Sept. 2020, go to <https://ssrn.com/abstract=3750292> (pp. 20); Hal Varian was professor in micro-economics at Berkeley and is now Chief Economist with Google. The paper aims to show empirically that the [7] usual objections to Big-Tech are all untrue as shown by (economic) facts. Interesting 'food for thought'.

[*recommended*] P. Larouche & A. de Streel (2021), *The European Digital Market Act: a revolution grounded on traditions*, *Journal of European Competition Law & Practice*, September, Vol. 12, 7, pp. 542-560.

## 5. Towards an internal market for electricity, without and with the climate

ACER (2022), *ACER's final assessment of the EU wholesale electricity market design*, April, [www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/ACER%2520Final%2520Assessment%2520of%2520the%2520EU%2520Wholesale%2520Electricity%2520](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%2520Final%2520Assessment%2520of%2520the%2520EU%2520Wholesale%2520Electricity%2520), pp. 2-7 Exec S.

Eur Commission (2023), *State of the Energy Union 2023*, COM (2023), 547 of 24 Oct 2023, see [www.ec.europa.eu/commission/presscorner/detail/en/ip\\_23\\_5188](http://www.ec.europa.eu/commission/presscorner/detail/en/ip_23_5188) ; plus one Annex on energy subsidies (a separate report)



## 6. Towards an internal market for gas ?

M. Catuti, C. Egenhofer & M. Elkerbout (2019), The future of gas in Europe, *CEPS Research report* 2019/03, August, [www.ceps.eu/wp-content/uploads/2019/08/RR2019-03\\_Future-of-gas-in-Europe.pdf](http://www.ceps.eu/wp-content/uploads/2019/08/RR2019-03_Future-of-gas-in-Europe.pdf) (pp. 23)

The COM proposal on common rules in “new” gases such as renewable gases and hydrogen, from December 2021, is interesting but extremely complex (pp. 335) ; in addition, there is a proposal – also from Dec. 2021 – on methane ; **compulsory** is the one on renewable gases and hydrogen, COM (2021)803 of 15 Dec. 2021, but **ONLY** pp. 1-11 [reasons for and objectives of the proposal] – <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A803%3AFIN&qid=1639664719844>

IEA (2022), How the EU can avoid natural gas shortages in 2023, December ; find the report via [www.iea.org/news/how-the-european-union-can-avoid-natural-gas-shortages-in-2023](http://www.iea.org/news/how-the-european-union-can-avoid-natural-gas-shortages-in-2023)

Daniel Gros (2022), Why gas prices and consumer subsidies are both extremely costly and ultimately futile, *CEPS Policy Insights* no. 2022/28, August [www.ceps.eu/download/publication/?id=37300&pdf=CEPS-PI2022-28\\_cost-energy-subsidies.pdf](http://www.ceps.eu/download/publication/?id=37300&pdf=CEPS-PI2022-28_cost-energy-subsidies.pdf)

## 7. The internal market for air transport

European Commission, SWD(2019) 296 of 9 July 2019, Executive summary, evaluation of the common rules on air services (5 pp.)

[*recommended*] A. Haylen & L. Butcher (2017), Airports slots, House of Commons, *Briefing paper* no. CPB 488, June, [www.parliament.uk/commons-library](http://www.parliament.uk/commons-library)

[*recommended*] M. Akguec et al (2018), Low-cost airlines, *CEPS Research report*, May ; see [www.ceps.eu](http://www.ceps.eu)

[*recommended*:] G. Burghouwt, P. Mendes de Leon & J. de Wit (2015), EU air transport liberalisation: process, impacts and future considerations. Discussion Paper 2015-04, International Transport Forum/OECD, [www.itf-oecd.org/sites/default/files/docs/dp201504.pdf](http://www.itf-oecd.org/sites/default/files/docs/dp201504.pdf) and

M. Landru et al., (2021), Study on the economic developments of the EU Air Transport Market, **ONLY pp. 15 – 30** ; see [www.ec.europa.eu/en/publication-detail/-/publication/41452579-7005-11eb-9ac9-01aa75ed71a1](http://www.ec.europa.eu/en/publication-detail/-/publication/41452579-7005-11eb-9ac9-01aa75ed71a1) (EGIS & SEO ) ] for the Commission

## 8. A competitive internal market for (freight ) rail

Y. Crozet & C. Nash (2019), A decarbonised transport system, Brussels, September, [www.cerre.eu/wp-content/uploads/2020/05/cerre\\_whitepaper2024\\_mobility-1.pdf](http://www.cerre.eu/wp-content/uploads/2020/05/cerre_whitepaper2024_mobility-1.pdf) [only pp. 1-14]

C. Nash & A. Smith (2019), The future of rail, regulation and competition for an innovative industry, CERRE Issue paper, February, 10 pp.,

[www.cerre.eu/wp-content/uploads/2020/05/190201\\_IssuePaper\\_RailInnovation\\_Final-compressed.pdf](http://www.cerre.eu/wp-content/uploads/2020/05/190201_IssuePaper_RailInnovation_Final-compressed.pdf)



M. Castelletti (2021), Rail's role in the age of decarbonisation, *Network Industries Quarterly*, Vol. 23,4, December, pp. 6 – 9, <https://www.network-industries.org/2021/12/16european-rail-more-central-than-ever/>

EFRA (2022), The European Railfreight market, competitive analysis and recommendations, April, [www.efr rail.eu/uploads/The%20European%20Rail%20Freight%20Market%20-%20Competitive%20Analysis%20and%20Recommendations-1649762289.pdf](http://www.efr rail.eu/uploads/The%20European%20Rail%20Freight%20Market%20-%20Competitive%20Analysis%20and%20Recommendations-1649762289.pdf) ; esp.ch. 3 (pp. 26-43)

Y. Crozet et al. (2023), The promises of European rail, June, Brussels, CERRE, June, [www.cerre.eu](http://www.cerre.eu)

## 7. EVALUATION

First examination session:

The course will be evaluated with a closed-book written exam. Dictionaries are allowed in the exam room.

The exam may consist of 4 or 5 sections – in most, students will be asked questions with choice and answer a specified number of questions or sub-questions. The grade for the exam constitutes 90 % of the course mark. The remaining 10 % comes from an assessment of the student presentation on a pass/fail basis.

Second examination session:

Article 18a of the Study Regulation applies.

**The College of Europe reserves the right to change the delivery and assessment of the course in case of restrictions related to the Covid-19 pandemic. Any communication from the Department in this regard takes precedence over the information provided in this ECTS card.**