

TOULOUSE SCHOOL OF ECONOMICS PRESENTS

TSE FORUM
digital
&
energy

8th JUNE 2017

9:30 - 18:30

PALAIS BRONGNIART
PARIS

TSE forum
highlights 2017



TSE FORUM digital & energy



INTRODUCTION

On June 8 at the Palais Brongniart in Paris, the TSE Forum gathered world-class economists and executives working at the forefront of the digital and energy sectors to offer their insights and debate the future of those industries.

For an exclusive audience of leading decision-makers, journalists and researchers, the day kicked off with a masterclass by TSE's **Alexandre de Cornière** on the challenges of the age of digital platforms, followed by a roundtable discussion of these issues by Blablacar entrepreneur **Frédéric Mazzella**, Accor SVP **Pierrick le Masne**, and TSE president **Jean Tirole**.

The afternoon session followed with back-to-back debates featuring EDF chairman **Jean-Bernard Lévy**, MIT economist **Richard Schmalensee**, Total executive **Philippe Sauquet**, and World Bank economist **Stéphane Straub**, Engie executive **Antoine de la Faire** and the Haas Energy Institute's Catherine Wolfram.



Alexandre
de Cornière - TSE
Masterclass on
Digital platforms
10:00 - 11:00

What's a platform?

It's an actor that allows different groups to interact, selling access to other users. There's great diversity: trading platforms (Amazon, Airbnb or Ebay); social networks (Facebook, LinkedIn, Twitter); payment systems (Visa, PayPal); operating systems (iOS, Android); communication systems (email, Skype).

How have platforms become so important?

Through the advance of technologies such as microprocessors, fixed and mobile internet, cloud computing. Today the five biggest firms in terms of market capitalization (Apple, Google, Microsoft, Amazon, Facebook) are all platforms.

Masterclass on 'Digital platforms: economic and strategic issues's

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NETWORK EFFECTS

When a platform's value increases with its number of users, these network effects create economies of scale - the more users, the lower the average cost.

Network effects present a problem of coordination in which people will only use a platform if they anticipate that others will also participate. In these multiple equilibria, everyone joins in or everyone doesn't.

Dynamic pricing is one way firms deal with this problem, offering very low or negative prices during the launch phase. Other strategies include asymmetric pricing and vertical integration, attracting users with additional, often complementary services.

NATURAL MONOPOLIES

While network effects can be an obstacle for new firms, they can be a formidable shield for established firms. In a natural monopoly, just one firm will operate at equilibrium.

Everything hinges on contestability. It's important for regulators to create the conditions that allow other firms to enter and overtake the established firm.

Established firms have several strategies to counter new entrants. Microsoft's insistence that Internet Explorer be installed with Windows is an example of bundling, and Google faces investigation in Europe for similar practices. Other problematic strategies are the buyout or imitation of competitors.

FRONTIER RESEARCH

Platforms are ecosystems which confront market failures of two types: information asymmetry (we don't always know who or what we are dealing with); and externalities (when an action has consequences for an unrelated third party).

To deal with these problems, platforms attempt to control access and interactions. Some platforms are highly centralised, others leave agents to take their own decisions.

Recommendations play a powerful and not always positive role. Platforms like Google and Netflix are likely to recommend their own services and advertising space rather than those of rivals.

Price control is another burning issue, as are most favoured nation clauses, in which platforms insist that sellers never offer a lower price elsewhere. Platforms argue they need to protect their investment, but these practices provide an incentive to charge excessively high commissions

“Networking
effects can be
two-edged for
companies”

Regulators need to be aware of the importance of network effects for market structures and strategies. The ambiguity of the relationship between the platform and the user is a very new research area. Economists have plenty of work to do!

The platform revolution and the impact on competition

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Pierrick Le Masne

SVP Strategic Planning, Accor

Today, 25% of hotel reservations are made online: 40% on hotels' own websites, 60% on intermediaries such as Booking and Expedia - these are highly profitable, interdependent monopolies.

Airbnb is attractive because it gives the impression of being more personal. This is a superb innovation of the economic model.

Hotels need to reinvent the product. We've been forced to move out of reception and learn new expertise. What is the true profession of a hotel chain? Who are our competitors: Marriott or Booking?

The hardest thing for traditional big firms is that we can no longer rely on continuity. We have realized that we are mortal.



“The collusion of platforms is very strong in the hotel sector. They are a monopoly, highly profitable and interdependent”

ROUND TABLE 11:00 - 12:00

The platform revolution and the impact on competition

Alexandre de Cornière - TSE
Jacques Crémer - TSE (Moderator)
Pierrick Le Masne - Accor
Frédéric Mazzella - BlaBlaCar
Jean Tirole - TSE

Frédéric Mazzella

President & Founder, BlaBlaCar

Three technologies have now matured to create new services and opportunities: databases, search engines and connectivity. Together, these technologies have allowed us to share our content, knowledge, networks, money, goods and time.

We can't regulate all this in the same way. And once humans have shared all this, what remains? We'll be left with love, art and sport.

BlaBlaCar has 45 million members in 22 countries. To achieve this success, we've had to help construct trust online. When provided with the right tools, users can recreate a sense of trust almost comparable to that of friends. That's the energy or fuel behind platformization. It's a new economy.



TRUST IN THE FUTURE

Together with NYU Stern Professor and sharing economy specialist, Arun Sundararajan, BlaBlaCar has produced a report on the mechanics of online trust, see:

www.blablacar.com/trust

Jean Tirole

TSE Chairman

Nobel 2014

Toulouse economists helped devise European Commission rules for credit card payments. But economists are very late in addressing the regulation of platforms.

People are very worried about the impact on the workplace. We can debate the employment status of an Uber driver for hours, but what's important is equality of opportunity. There's a trend toward less wage-earning jobs and more self-employed independents. One factor driving this is that building individual reputations has been facilitated by platforms like BlaBlaCar, Uber, Airbnb.

The world may become richer and healthier, but we are not prepared for what awaits us, including the challenges of inequality. The solutions are income redistribution, better education and protecting employees rather than jobs.



FIND OUT MORE

Economics for the Common Good by Jean Tirole



“We've succeeded in creating bridges between people who've never met each other before”

“Platform monopolies are inevitable. How do we manage these and make the market competitive?”

Energy, transition and development

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Antoine de La Faire
Strategic Executive, Engie



“Energy transition
is no longer just a
nice thing to think
about, it’s become
the best economic
option”

ROUND TABLE 13:30 - 15:30

**Energy, transition
and development**

Christian Gollier - TSE (*Moderator*)
Antoine de La Faire - Engie
Stéphane Straub - TSE
Catherine Wolfram - Energy Institute
at Haas

Catherine Wolfram
Energy Institute at Haas



Development is clearly correlated with energy consumption, but does energy drive development, or is it the other way around?

There are up to 1.3 billion people who don't have energy in their homes. Our experiment in western Kenya found that bringing in electricity had zero impact on people's lives. Kids weren't studying more, incomes didn't go up, people weren't consuming better food. These people lack many things. And once connected, they couldn't afford many appliances.

So it's not clear that this is the way to solve poverty. Another option is to power local firms with reliable electricity so they can expand and employ people.

“If we had a dollar to invest in the
energy sector, what would be the
most profitable investment in
terms of driving development?”

Stéphane Straub
TSE



Energy has direct and indirect effects that can be positive and negative. About four million people are estimated to die prematurely because of using traditional biomass fuels for cooking.

We've connected 2.3 billion people to electricity. How should we connect the rest? This has very different regulatory implications because on-grid generation tends to be mostly fossil fuel, while mini grids are mostly powered by renewables. It's very optimistic to look to private financing for solutions – it necessarily excludes people, and we're not that good at targeting corrective subsidies.

We cannot address energy issues in isolation, we need to think about the complementarity between services, water, transport, poverty and infrastructure in general.

“You can have access
to energy and still be
considered energy poor”

Energy and market organization

ROUND TABLE 16:00 - 17:30
Energy and market organization
Thomas-Olivier Léautier - TSE
(Moderator)
Jean-Bernard Lévy - EDF
Philippe Sauquet - Total
Richard L. Schmalensee - MIT
Jean Tirole - TSE

Jean-Bernard Lévy
Chairman, EDF

EDF has been able to deliver to France a very low-carbon power system. France emits only 15g of CO₂ per kilowatt hour, whereas Germany emits 400g. It's doable, but it's due to good decisions about hydraulic and nuclear energy.

The EU-ETS system has failed. We support national initiatives for a carbon price floor, which can be effective very quickly as we've seen in the UK. The time is right for an initiative from France, with support from Germany, to use existing gas plants instead of coal plants. This could quickly reduce carbon emissions every year by 40 million tons.



“With continuous support to wind and solar power, we have overcapacity in Europe. The market is very sick”



“We feel very optimistic because solutions do exist”

Philippe Sauquet

President Gas, Renewables & Power and Executive Vice President, Strategy & Innovation Vice President - TOTAL

The energy landscape has completely changed. Ten years ago, we were fearing peak oil and peak gas, with ever-growing costs, and dependence on oil-producing countries. Those limitations no longer exist. Coal is no longer needed; there is enough gas to replace it.

We need to support capital-intensive pilot projects such as CCS (carbon capture and storage) or second-generation biomass. Everybody is ready to support R&D, but the difficulty comes with industrialization, especially in Europe. Today 40% of the cost of electric vehicles is the battery; and we are on the verge of seeing all cells manufactured in the US or Asia.

Richard Schmalensee
MIT

It's time to start thinking about climate policy decades into the future. Policies last for decades and the problem is going to get harder. We talk about zero emissions by 2050 - that's not just putting up more windmills. That's not even decarbonizing electricity, which is less than half of global emissions. The harder it is to make those last reductions, the less likely that they will happen.

If we're serious, absent President Trump, about getting to zero emissions, it needs to be as cheaply as possible and that means letting the carbon price do what only it can do.



“Decisions we make about policy today are likely to be around in 2050”

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TSE FORUM IN THE NEWS

<https://www.bloomberg.com/news/articles/2017-06-09/macron-said-to-push-for-franco-german-co2-emissions-price-floor>

Jean Tirole
*TSE Chairman
Nobel 2014*

The most obvious thing missing from COP21 is carbon pricing.

There's a lot of disagreement over whether we should use a carbon tax or 'cap and trade'. My own view is for 'cap and trade' because it's very hard to implement a carbon tax. But for the moment these problems are second order.

We need an independent body that monitors countries' emissions and holds them accountable. We must find ways of imposing the agreement, then confront the question of equity.



“I've been very critical of COP21, but it has the right diagnosis”

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