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### Contact us:

the.tseconomist@gmail.com

www.tseconomist.com





Dear readers,

This thirty-fourth issue of The TSEconomist magazine is the first issue of the new editorial board for the 2023-2024 academic year.

The primary challenge of the new board was to learn the technicalities of managing the publishing procedure and trying to keep up with the legacy of the previous boards. The enthusiasm and the energy always kept us moving for the publication of the issue.

This summer saw wet bulb temperatures across tropical countries, heatwaves and wildfires in temperate climates and Europe, followed by flooding in several parts of subcontinents. An obvious choice for us to discuss the topic of Climate Crisis in the new issue. As student researchers it further interested us to know the geo-economics of climate change and its impacts.

The issue starts with an interview from Cecilia Castaldo at the University of Verona, in which she talks about the El-Nino and climate change, the mitigation attempts and what can be done better. The spotlight articles feature three diverse pieces, each dealing with fundamental climate crisis issues and how we as aware citizens can act. This issue adds to the debate on climate change by further asking some provoking questions about the way we approach climate change, how are food choices are important and what cutting travel means for the environment.

There are also some interesting articles on the pension reforms, and use of AI in academic research.

This issue also features internship and gap year reports, and a mini-guide to students' fun life at the TSE and UT Capitole- essential for those entering school this semester.

In the coming year, we wish to organise interesting coffee talks and sessions, apart from publishing our issues. We hope to see you all in numerous!

We wish you a good read

### Remark:

All the writings in this issue remain the strict responsibility of their authors and in no way represent the opinions of TSE and its members.

Article references are available upon request.

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# Every contribution, even small, is welcomed!





There have been a lot of talks about this year's climate crisis being affected by the El Nino-La Nina, could you talk to us about how exactly this affects weather patterns and extreme climates?

El Niño-Southern OscillaIon (ENSO) is one the most important global climate regulator. While the effects in the Pacific-North American areas and the tropical regions are relatively well understood, the impacts on the circulation in the North Atlantic-European part are discussed more controversially.

The phenomenon called El Nino (WMO) identifies the warming of the surface of the southern and eastern central Pacific Ocean. The variation is at least half a degree but can be as much as 3-4. Usually, this phenomenon occurs at intervals of two to seven years and lasts between nine and twelve months. The consequences of the phenomenon vary depending on the areas involved. Typically, it brings heavy rainfall in the southern part of the United States and South America, Central Asia and the Horn of Africa. Conversely, it brings drought to Australia, Indonesia and parts of South Asia, also weakening the Indian monsoon. During the boreal summer (the European one, to be clear), warm currents foster the formation of hurricanes in the central and eastern Pacific and, conversely, hinder it in the Atlantic. If El Niño is particularly strong, it ends up affecting atmospheric circulation, i.e. the set of air movements that distribute heat over the earth's surface. As the heat moves eastwards,

winters can be longer and colder in states such as California and Washington.

If, on the other hand, the surface of the central Pacific Ocean has a temperature lower than the seasonal average by at least half a degree for five months or more, this means we are facing the opposite phenomenon, called La Niña. This happens because the trade winds strengthen and push warm water towards Asia. The colder deep waters thus rise to the surface (this is called upwelling) in the area of the Pacific that lies between the Tropic of Cancer and the Tropic of Capricorn. Being colder, they cause the jet stream, i.e. the air current that blows from west to east over the Atlantic Ocean, to move further north. As a result, the southern part of the United States is drier, as is the west coast of Colombia, Ecuador and Peru. In contrast, it rains more in south-eastern Africa and northern Brazil, and the summer monsoon intensifies over India and Bangladesh. In Australia during La Niña there are heavy rains and floods that can be catastrophic; as in 2010, when 10,000 people were forced to leave their homes. La Niña usually lasts longer than El Niño: one to three years.

There is no consensus among scientists on what triggers these phenomena to happen. However, climate change intensifies extreme weather events, so we could start to see warmer, wetter El Niños and drier La Niñas as climate change continues. In 2016, the last time we had a strong El Niño, coral bleaching in the Pacific increased, fires fueled by drought-ravaged Australia,

and South America faced massive floods. Climate change compounds these disasters, bringing shifting hurricane patterns, more intense droughts, and even worse floods.

Europe is seeing rising temperatures this summer. However, this is not the first time that summers have been unbearable, how are the European governments dealing with this?

Extreme weather events are clearly becoming more and more frequent, and we are experiencing them in our daily life. Work-related deaths and injuries linked to unsuitable working conditions due to heat and high temperatures have been increasing in those years. This is particularly common to workers who spend most of their time working outdoors such agriculture, industry, and construction sector.

As the thermometer is reaching up to 45 degrees Celsius mainly in Southern Europe, put on high alert, we realize that we need to address the issue of when is it "too hot to work". However, at the moment only a few countries have set a maximum workplace temperature in national legislation, and it varies from 28 to 36 degrees Celsius among Member States.

As for the other extreme weather events that are threatening our every day, it is not enough to work on a single policy that directly addresses the problem of high summer temperatures. But what is needed is an integrated policy plan that engages stakeholders at national and local levels from different sectors. Indeed, some EU legislation is dealing with this issue by regulating specific sectors that concur with the rising temperatures, such as industrial and livestock farm emissions, by binding limits for pollutants.

On one side we have mitigation and on the other side, we have adaptation.

I can give you an example of how complex could be to identify a single policy perspective to adopt. The problem of high temperatures could be tackled from the point of view of adaptation, e.g.

"It is not enough to work on a single policy that directly addresses the problem of high summer temperatures. But what is needed is an integrated policy plan that engages stakeholders at national and local levels from differ-

ent sectors."

by adjusting working conditions, providing public areas to cool off, or planting more trees to provide more shadiness in cities, while at the same time raising awareness among the population to avoid exposure during the hottest hours.

Addressing the problem of rising temperatures from a mitigation perspective, on the other hand, is about acting on all those economic activities that contribute to releasing large amounts of carbon dioxide and other greenhouse gases into the atmosphere. Promoting the consumption of 'deforestation-free' products and reducing the EU's impact on global deforestation and forest degradation or regulation on the restoration of marine biodiversity like Protection of Posidonia oceanica under the Habitats Directive for Natura 2000 sites, are forms of directive strategies to deal with heatwaves.

I think that we're still learning as researchers and politicians how to deal with climate change as a whole and how to fully shift our economic sector toward an ecological transition.



Talking about the wildfires in Greece and Italy. What exactly causes this, and are there early warning signals that need to be noted when talking about mitigating wildfires?

Wildfires can originate from both natural occurrences, such as lightning or spontaneous combustion, and human actions like vehicle fires, discarded cigarettes, or campfires. Although the Environmental Protection Agency classifies wildfires as natural incidents, only a small fraction, roughly 10 to 15 percent, actually happen naturally. The majority, about 85 to 90 percent, are caused by human-related factors like abandoned campfires, debris burning, discarded cigarette butts, and deliberate acts of arson. The likelihood of wildfires significantly rises during drought and arid weather conditions when the landscape is covered in extremely bone-dry and easily flammable plants.

I think that we're still learning as researchers and politicians how to deal with climate change as a whole and how to fully shift our economic sector toward an

ecological transition."

Climate change is undeniably contributing to more intense lightning storms. The warming and elongation of summers lead to higher temperatures on the earth's surface. Coupled with an increase in carbon emissions, this creates stronger upward air currents, resulting in more frequent and powerful lightning strikes. According to a study carried out in 2014, every one degree Celsius temperature increase corresponds to a 12% uptick in lightning strikes. By taking steps to address climate change and reduce global warming, we can effectively decrease the occurrence of extreme weather events like lightning strikes and subsequently lessen the risk of wildfires. Furthermore, maintaining consistent temperature and rainfall patterns can significantly reduce the presence of dry vegetation.

On the Greek Rhodes Island, an estimated 19,000 tourists had an exodus due to the wildfires overnight. Many recount the experience as horrific and are stranded in makeshift shelters or airports. What can be done better from a logistical point of view in areas prone to such crises to avoid risking lives?

Some areas are more prone to wildfire, where there is a mixture of bone-dry, flammable fuel; strong winds that spread fire quickly; and temperatures that encourage combustion.

It is possible to evaluate the risk of wildfires in specific areas and predict how they will evolve with mathematical models based on parameters that define their characteristics and development. This is possible through the integration of meteorological

data, topography, and the characteristics of vegetation into mathematical models that allow to create risk indicators. These indicators, in turn, provide the groundwork for efficient communication between the different stakeholders involved in risk management procedures. In order to build this risk prevention network, it should be a priority to invest more in these forecasting procedures to keep tourist and urban areas safer.

As citizens, we should increase our capacity to reduce, reuse and recycle in our everyday life. Another point which I think it is part of our effort to vote for politicians that are concerned about climate change and environ-

mental degradation. ""

From a disaster management point of view, how can European cities be designed adaptively to mitigate such heatwave crises in future? What can active citizens do to minimise such crises and be prepared?

To reduce urban heat, some European cities have implemented some urbanistic measures that reduce heat stress.

One of them is to increase the green landscape in cities. On one hand, planting trees can reduce surface temperatures by up to 12°C in summer. On the other hand, green stretches of land without tall buildings or trees, called ventilation corridors, can draw cooler air from surrounding areas. Another issue is urban pollution: many big European cities have already incentivized "green mobility" by building new infrastructures for nonmotorised means of transport. It is still not enough, especially in highly industrialised urban centres where public mobility should be empowered to make it easier to avoid the use of road transport for commuting.



Source: Hellenic Initiative

Have human-related actions aggravated the El-Nino impacts? What are some lifestyle and daily changes that we can bring for adaptive behaviour?

Human-related actions are a direct cause of climate change patterns, such as droughts, high temperatures and loss of biodiversity. These events exacerbate the natural phenomena of El Nino-La Nina.

There are many economic sectors that are facing a crisis due to a shortage of natural resources and raw materials due to overproduction and waste. The agri-food sector is one of the most polluting economic sectors but also one of the most vulnerable to changing weather condilons that triggers food security issues. As citizens, we should increase our capacity to reduce, reuse and

recycle in our everyday life. Another point which I think it is part of our effort to vote for politicians that are concerned about climate change and environmental degradation.

If you think you could do better than you're doing now, it means you're not doing enough.

Cecilia Castaldo is a Doctoral Student and researcher in Regional Science and Economic Geography at the Social Science Unit, GSSI. She is graduated with a Master's Degree in Emergency and Disasters Governance from the University of Verona, Italy. She is specialized in the evaluation of the risk of water scarcity in remote areas.

# Wildfire and Wildlife Emergency - how you can help

Help Greece and Turkey from scorching wildfires that are uprooting its flora and fauna. Greece and Turkey house wildlife that are exotic to those regions and cannot survive elsewhere.

What can you do?

World Widllife Fund is open to donation:

https://lp.panda.org/med-wildfires
Donate for Wildlife Emergency Kits and Wildlife

Rescue Centers:
https://lp.panda.org/med-wildfires

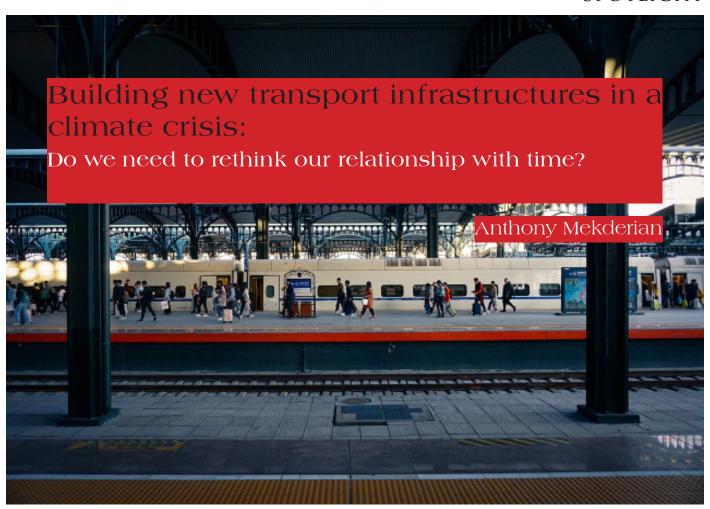
Visit The Hellenic Initiative to help donate for the Greek Wildfires and Disaster Management fund: https://www.thehellenicinitiative.org/

For those interested in helping people specifically affected by the Hawaii wildfires, you can still select Hawaii Wildfires on redcross.org, or call 1-800-RED-CROSS (800-733-2767), or text the word HAWAII to 90999 to make a \$10 donation.

https://www.redcross.org/about-us/news-andevents/climate-crisis.html https://kse.ua/we-save-lives/

# SPOTLIGHT





A ccording to the French High Council for Climate (*Haut conseil pour le climat*), in 2019 the transport sector was the main source of CO2 emissions in France, accounting for 31% of emissions, ahead of the building sector (19%), agriculture (19%) and industry (18%). It represents the greatest lever France can use to bring about the energy transition.

To help with deciding whether — or not — to build a new transport infrastructure, economists need to do a socio-economic evaluation, based on a cost-benefit analysis (CBA). In France, it has been a regulatory obligation to produce one for "major" transport infrastructure projects since 1982 (article 14 of the French law on internal transport, LOTI), and since 2012 for any public funding in excess of 20

million euros. The objective of this evaluation is to extend beyond the financial considerations and delve into broader effects, such as externalities, that an investment may have on the overall welfare of society. It takes therefore into consideration the economic, social and environmental dimensions of a project.

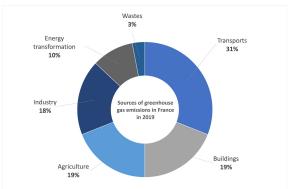
To make them comparable, it is necessary to monetise these non-marketable aspects. It means assigning a value to travel time, carbon emissions or even life. When we talk about the value of travel time, we typically refer to the maximum amount an individual would be willing to pay to reduce his travel time by a certain amount of time. According to Welch et Williams (1997), who took the example of motorways, travel time savings typically account

for 70 to 90% of socio-economic gains. In the context of a climate crisis, we can question the relevance of this tool and more generally, open the debate for reconsidering our relationship with travel time.

"From a socio-economic point of view, in 2018, the value given to 2 tonnes of CO2 was the same as the one given to 8 hours of intercity travel."

# Building motorways in 2023: faster at all costs? Energy transformation 10% Transports 31% Transports 31% Transports against the new motorway between Toulouse and Castres gave rise to reconsidering the ne-

new motorway between Toulouse and Castres gave rise to reconsidering the necessity of building this infrastructure. The objective of this motorway was initially to save 35 minutes of travel time between both cities, according to the Declaration of public interest. However, this number has strongly been questioned by the counterexpertise by the General Commissioner



Source: Author's creation using data from the French High Council for Climate (2019)

(Commissaire Général à l'Investissement) and the French Environmental Authority, estimating the savings around 15 to 20 minutes. In both cases, the travel time savings represent about 60 to 65% of the total advantages of the project. These travel time savings are made at the expense of carbon-emissions, because building new transport infrastructure for cars encourages their continued use. The Ademe (the French Ecological Transition Agency) estimates this transport mode as the most carbon-intensive one in France, with about 17 kgCO2-eq emitted for an 80 km trip (when being alone in the car), compared to only 0.5 kgCO2-eq by rail. However, in the case of the Toulouse-Castres motorway, the value given to environmental impact is 7 to 14 times lower than that given to travel time savings. The French Environmental Authority also suggested, "the impact study still contains many gaps with regard to health impacts, energy consumption and greenhouse gas (GHG) emissions."

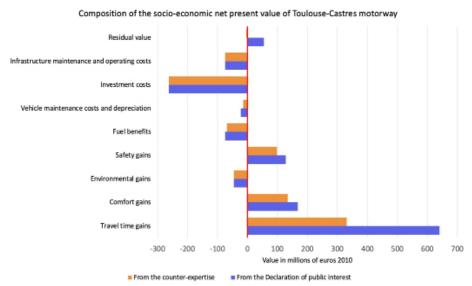
The problem of going faster than the existing national road on the Toulouse-Castres route is that according to the Cerema (2021), speed is the first factor of influence on GHG levels and atmospheric pollutants. Taking the example of reducing motorway speeds from 130 to 110 km/h, they evaluated fuel savings of 16% per kilometre travelled. For a trip of 100

time in socio-economic evaluations are determined by combining findings from studies based on both stated (hypothetical consumer choices) and revealed (actual consumer choices) preferences, reflecting how individuals value their own time. Based on economic conditions in 2015, the value given to one hour of transport saved by a single person in urban areas in 2015 was 8.4 euros. It was about 14.1 euros for intercity trips of 80 kilometres.

In socio-economic evaluations, a tonne of CO2 was valued at 53 euros in 2018 under 2015 economic conditions. Through a straightforward comparison of their valuations, two tonnes of CO2, which represents the annual carbon "budget" for an individual to respect the Paris Agreement, is valued as much as eight hours of intercity time travel of 80 kilometres. This striking example sheds light on our responsibility in how we value our travel time and the impact it has on ensuring a sustainable and resilient future.

# Night trains: a (re)new way of travelling

According to the International Energy Agency (IEA), the GHG intensity per passenger-km (pkm) in 2019 for non-urban trips with rail was about 14 gCO2-eq/pkm on average, it was 144 gCO2-eq/pkm for air. It means that overall, trains are more eco-friendly than aircrafts by a



Source: Author's creation using data from the French Government (2016)

km, it would increase the travelling time by eight minutes. It means, even minor adjustments to journey times can lead to significant reductions in GHG emissions. It prompts us to question the importance we assign to travel time, especially within the context of a climate crisis.

Currently, in France, the values of travel

factor of 10. In France, because nuclear power is mostly used to produce electricity, the carbon footprint of trains is even lower. According to the Ademe (2020), in France, the GHG intensity of trains is 2 gCO2-eq/pkm, whereas it is 200 gCO2-eq/pkm for aircrafts. It means a factor of about 100.

# "The fastest transport mode also happens to be the most carbonintensive."

It is therefore clear travelling by train is better for the climate than by airplane. However, we can identify two main constraints from travelling by train:

- 1) the price: a study from Greenpeace (2023) evaluated the price of trains as 2 times higher than airplanes in Europe for the same trip. It is even 2.6 times higher in France.
- 2) the travel time: for example, to do a Paris-Lisbon trip, by airplane it takes approximately 2h30, whereas it takes more than 24h by train.

One of the solutions to shift passengers from air to rail and to tackle the second issue are night trains. This transport mode is making its (slow) comeback in Europe, a couple of lines are opening soon from Paris: Paris - Berlin (scheduled to open late 2023), Paris - Warsaw (in 2024), Paris - Barcelona - Madrid (in 2024), and Paris - Rome (in 2024). The advantage is that in night trains our relationship with time is different: we can sleep. While sleeping, the time is not "wasted" as it could feel while travelling by train during the day (even if the development of Internet networks within trains allows us to be productive and make efficient use of travel time). Concretely, according to a poll from Back on Track (2022), "up to 32 % of passengers could switch to night trains if there were an attractive offer". As a result, there is a need for substantial investments in night train transport infrastructures.

However, from a socio-economic point of view, it seems to be more difficult to promote night train projects. They do not benefit from huge travel time savings, as the purpose is not to go faster, but to make efficient use of this "wasted" time (especially to sleep). Also, no value of time is currently given to night trains mode, only trains in general, however, we can easily suppose such a specific value will not promote night trains. In fact, the value we assign to one hour in a night train while sleeping is likely to be lower than regular day trains. The opportunity cost of sleeping is lower than the one of being awake, as we could be more productive. In this context, we can ask: Is socio-economic evaluation relevant in this context if the

purpose is not to save time? The strongest benefit of night trains could be the reduction in carbon emissions through modal shift.

Finally, the cost-benefit analysis tool used in socio-economic evaluation seems to have limits when considering the climate crisis context. The high value given to travel time compared to the one attributed to carbon emissions seems to represent the main one. The result of this tool is strongly subject to how we monetise the externalities and travel time, which ends up being a matter of choice in a climate

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# A Global Challenge for a Planet in Peril

In 2015, the Conference of Paris, also known as COP21, marked a historic turning point by reaching an unprecedented international agreement. This event brought together a considerable number of participants and stood out for the firm commitments made to limit global warming to 1.5°C, following the recommendations of the Intergovernmental Panel on Climate Change (IPCC). However, the latest IPCC reports in 2023 underscored the urgency of the situation and the considerable magnitude of the task ahead to achieve this goal. It is now crucial to limit our environmental impact to address these global challenges.

One of the keys to countering this problem lies in our food consumption habits. Adopting more sustainable and responsible diets is seen as an essential solution. Ritchie et al.'s study (2022) revealed that food production is responsible for over a quarter (26%) of global greenhouse gas emissions, impacting land and water use as well as biodiversity. These figures highlight the significant impact of our food choices on the environment and highlight the vital role our food system plays in combating climate change.

We are at a decisive crossroad where changing our food habits represents a major challenge. In this regard, individual behaviors play a crucial role in reducing our environmental impact, as do the implementation of appropriate policies. How can the evaluation of the environmental impact of food products guide environmental management policies while considering consumers' choices in the transition to more environmentally-friendly consumption patterns? This is what we will explore in the following sections.

# Measuring Environmental Impact to Take Action

The environmental impact, resulting from human activities on the environment, is a key concept to consider in our quest for sustainable food. According to the Agence De l'Environnement et de la Maîtrise de l'Energie (Ademe), a French institution, it encompasses all aspects of a product, from its design to its end of life, and includes air, water, and soil pollution, as well as the degradation of flora and fauna and waste production. Among the factors with the most significant impact on the environment, agriculture holds a prominent place, with its intensive practices and greenhouse gas emissions.

Awareness of the environmental impact of human activities is relatively recent and was reinforced by significant events such as the publication of Rachel Carson's book "Silent Spring" in 1962. Environmental disasters, such as the Exxon Valdez oil

"Ritchie et al.'s study (2022) revealed that food production is responsible for over a quarter (26%) of global greenhouse gas emissions, impacting land and water use as well as biodiversity."

spill and the Fukushima nuclear accident, have also contributed to increasing this awareness.

Recently, the environmental impact of our food choices has become increasingly important. Reports such as the EAT-Lancet Commission in 2019 raise awareness of the impact of intensive agriculture and encourage initiatives such as "Lundi Vert" in France, urging consumers to reduce

their meat consumption. This growing awareness has led to the implementation of measures to quantify damages and set thresholds to be respected. The evaluation of the environmental impact of food products is, therefore, a crucial step in fully understanding its issues and acting effectively.

and businesses towards more sustainable practices.

However, LCA faces criticism, notably for focusing on improving existing products rather than offering global solutions, and its integration of social aspects is sometimes limited. Similarly, Eco-Score also has certain limitations. For instance, the *Institut Technique de l'Agriculture Biologique* (ITAB) of France "warns of potential misleading conclusions" and

concerns, these two indicators remain effective means to assess the environmental impact of consumed foods and guide consumers towards more sustainable choices.

Overall, these evaluation tools play an essential role in understanding and reducing the environmental impact of our food products. They raise awareness and guide consumers and businesses towards more environmentally-friendly practices.

# Global greenhouse gas emissions from food production



# The French Example: A Vision for the

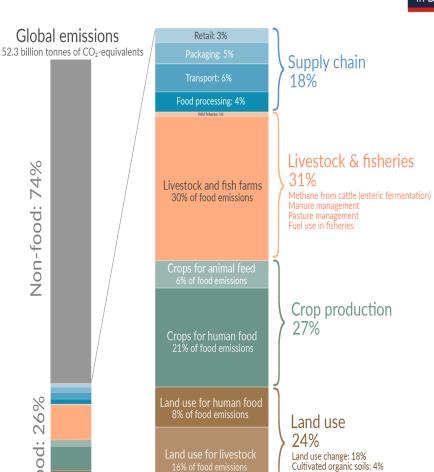
France is recognized as a leader in environmental management policies for more sustainable food. Measures implemented by the government aim to regulate agriculture, promote environmentally-friendly food production, and reduce pesticide use. Initiatives such as the Programme National pour l'Alimentation (PNA) and Ambition Bio 2022 have been launched to promote safe, healthy, and high-quality food while contributing to mitigating the effects of climate change.

However, achieving the ambitious goal of limiting global warming to 1.5°C, set by the Paris Agreement, requires concerted efforts at all levels, from production to consumption. For a genuine transition towards more sustainable food, it is essential to rethink our consumption patterns and implement suitable environmental policies.

# A Collective Commitment for a Sustainable Future

In conclusion, the evaluation of the environmental impact of food products is crucial in guiding our environmental management policies and consumption choices towards a sustainable diet. As climate and environmental challenges become increasingly urgent, it is essential that we all participate in this collective commitment to preserve our planet and ensure a sustainable future for generations to come. Only through a comprehensive and collaborative approach can we successfully address this global challenge.

By rethinking our food choices, adopting sustainable diets, and supporting policies that promote environmentally-friendly practices, we can make a significant difference in mitigating climate change and preserving our natural resources. Every individual has a role to play in this journey towards sustainability.



Data source: Joseph Poore & Thomas Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Published in Science.

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# Towards Sustainable Food: Little-Known Tools to Guide Our Choices

According to the European Commission, Life Cycle Assessment (LCA), an internationally standardized methodology, allows us to measure the environmental impact of a product throughout its life cycle. From production to end-of-life, LCA provides a comprehensive view of the environmental footprint. To support this evaluation, Ademe has developed the Eco-Score, an indicator that ranks food products from A to E based on their environmental impact. These tools aim to raise awareness and guide consumers

has made several demands. Additionally, Interbey, which represents red meat industries, is concerned that some meats from feedlots, i.e., vast American feeding parks, are rated better than meats from free-range farming. Despite these

Savannah burning: 2%

"How can the evaluation of the environmental impact of food products guide environmental management policies while considering consumers' choices in the transition to more environmentally-friendly consumption patterns? as biodiversity."



As a matter of fact, education and awareness campaigns can play a pivotal role in shaping consumer choices. By empowering individuals with knowledge about the environmental impact of their dietary decisions, we can inspire more conscious and responsible food consumption habits.

In conclusion, the journey towards sustainable and climate-friendl

"For a genuine transition towards more sustainable food, it is essential to rethink our consumption patterns and implement suitable environmental policies."

y diets is a collective effort that requires collaboration and commitment from all sectors of society. By making informed and responsible choices, supporting sustainable initiatives, and advocating for policies that protect the environment, we can take meaningful steps towards a healthier planet and a more sustainable future for all.

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The political debate around climate change is very polarized. On one hand, we have climate denialists and on the other, we have self-styled climate activists. The problem with this polarization is that it does not allow us to focus on what policies to implement to deal with climate change.

I would like to start by analyzing briefly the main ideas guiding the decision-making of these two above-mentioned very magnavox groups.

Climate denialists simply say climate change is a hoax. They argue that natural events like an increase in Total Solar Irradiance (Total Solar Irradiance is a metric to measure how much energy the sun sends to the Earth ) are to blame for the increase in world temperature. There are several reports that show the contrary. There are other arguments brought forward to try to argue that climate change is either not happening or it's not caused by humans. From a political point of view, we have to simply accept a significant but fortunately, a minority of the electorate is against any kind of political action to tackle climate change.

Self-styled climate activists are those people who often resort to protests and blockages to pressure politicians to tackle climate change. They are recognisable for their self-righteous and stoic attitudes showcased every time they talk about the environment. These people are even more vociferous than the previous group. The reason I say this is that, while the previous group has little influencing power over the rest of the electorate, these activists do have a lot of political leverage. Mainly because they receive overall good media coverage as they are portrayed as young activists fighting against big corporations. It's natural for human beings to stand by David's side and many people hold a romantic view of the youth. Unfortunately, the policies they propose are counterproductive, ineffective and unfair.

Moreover, climate activists generate the following problems:

- By staging protests that turn violent, they generate bad publicity for all people fighting for meaningful climate action
- By pushing for the wrong policies they pressure politicians to bring about the wrong reforms

I believe climate activists share a series of convictions when it comes to policymaking.

For example, the Western World has historical guilt it must atone for as it's

the West that started industrialization (*Greenpeace UK - RunnyMede Report*), or that one must rely on a set of very specific technologies like battery-powered electric vehicles or solar panels and governments have to select them and impose them.

"The Kuznets curve says that after a certain level of income emissions per capita start to fall as the utility people get from a well-kept environment is higher than the utility they might get from adding other polluting industries."

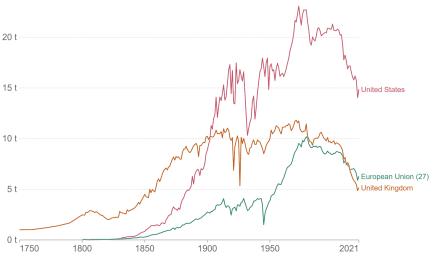
The position on the historical guilt of the West is unwarranted. First of all, industrialization allowed for an unprecedented increase in welfare standards. Just like any revolution in histroy of mankind, it spread to the whole world, irrespective of whether the West wanted it or not. Obviously, like every other type of change, industrialization has brought about negative things but historically speaking the Industrial Revolution is helping humanity

improve quality of life standards around the world. Unless we decide to stop this improvement, we have to accept the idea that we have to live alongside and manage global warming. Secondly, the Western world has already started cutting its emissions even without the mediatic fanfare associated with climate activists.

Look at the following graph for the proofs:

# Per capita CO2 emissions

Carbon dioxide (CO<sub>2</sub>) emissions from fossil fuels and industry<sup>1</sup> . Land use change is not included.



Source: Global Carbon Budget (2022); Gapminder (2022); UN (2022); HYDE (2017); Gapminder (Systema Globalis) OurWorldInData.org/co2-and-greenhouse-gas-emissions • CC BY

1. Fossil emissions: Fossil emissions measure the quantity of carbon dioxide (CO<sub>2</sub>) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO<sub>2</sub> includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes Fossil emissions do not include land use change, deforestation, soils, or vegetation.

I have taken the data on emissions per capita of the European Union and the United States (UK has also been added). These emissions are calculated based on production and are not adjusted for trade. If we considered the emissions adjusted for trade we would be counting the emissions produced by countries like China as the emissions caused by Western consumption styles. I decided to take this graph and not the one adjusted for trade because I want to show how this graph supports evidence in favour of Kuznets' curve. The Kuznets curve says that after a certain level of income emissions per capita start to fall as the utility people get from a well-kept environment is higher than the utility they might get from adding other polluting industries. For highincome countries, keeping things business as usual is okay because it simply means continuing to cut emissions like we have been doing for the past few decades.

For lower-income countries like China or India, I believe we have the moral duty to give them room to grow their economies and escape poverty as we Westerners have done. Obviously, we have to develop technologies to allow their growth without the pollution levels we have caused when we increase our income levels. Now, we rely on coal first and oil second to fuel

technical know-how.

"A better way is to allow automakers the technological freedom to come up with the best solutions to reach the pollution targets set by politicians"

our technological progress but new de-

veloping countries can count on greener

technologies like Nuclear Power to power

their energy needs. I believe that instead

of paying so-called climate reparations to

developing countries we should help them

to adopt greener technologies by financ-

ing their adoption, training the necessary

labour force and fostering the share of

This last point on the technologies to use leads me to tackle one policy mistake made by governments: imposing specific technologies on firms to fight climate change. With its Green Deal, the EU decided initially to ban all CO2-emitting vehicles. This would have outlawed even cars running on synthetic fuels. It's chemically impossible to burn fuel without producing CO2 as a result, but synthetic fuels would not increase global CO2 levels as they produce sequestering CO2 from the atmosphere thus when they are burned this sequestered CO2 is released back on the atmosphere. Banning E-fuels would have been absurd as it would have implied

banning a carbon-neutral alternative for cars. The prime example of this is imposing battery technology on automakers as the only way to produce clean vehicles. If we consider the subsidies handed out to battery producers by various European governments we can clearly see the mindset of European politicians is that BEVs (Battery Electric Vehicles ) are the way to go. (You can find multiple examples of such subsidies by googling "European governments subsidies gigafactories" ). This is the wrong way to proceed because we know from economic theory that the technologies necessary to fight climate change should not only be less polluting but also affordable to consumers.

The most logical way to proceed in these cases is to set emission targets for automakers like we have been doing in the past 20 years with the different Euro regulations and then let automakers find ways to cut emissions. By setting progressively tighter emission limits, governments could have set a clear trajectory for automakers toward a more sustainable auto industry by reaping the rewards of technological innovation.

However, European governments decided to push for BEVs and the ban on diesel engines. The mindset behind it is: that the Government knows best what to do, automakers know nothing and they should just execute the miraculous plans a few politicians come up with. I believe this is the wrong way of tackling pollution and a better way is to allow automakers the technological freedom to come up with the best solutions to reach the pollution targets set by politicians.

There is one final topic that should be addressed and climate activists desire to reduce carbon emissions already in the air (the least extremists say we should reach net-zero emissions and the most extremists say we should reach negative emissions ). It is unclear what they mean by net zero because it is hard to define a strategy to reach it. An example comes again from the car industry: e-fuels ( carbon neutral by design ) were considered negative by climate activists whereas BEVs were ok. Now, a BEV can pollute less than a traditional car during the entire life cycle in particular if the electric grid runs on clean energy- it would be best to rely on nuclear energy and indeed France has done so-, but a BEV still adds pollution to the atmosphere because someone still has to produce the car and the electricity.

Polestar and Rivian, two manufacturers of electric cars have published the

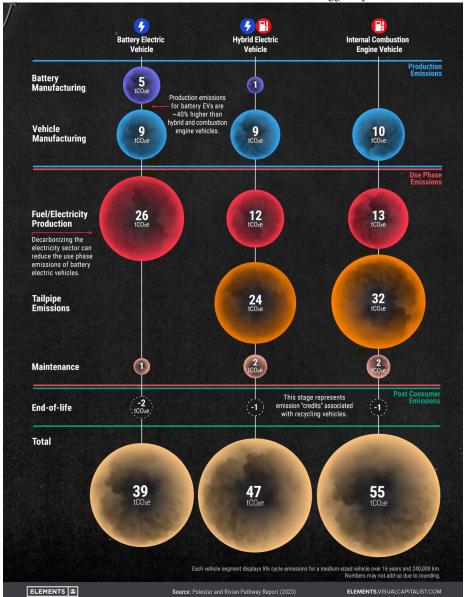
infographic to illustrate the different emissions levels of different types of vehicles over their lifetime. All types are expected to last 16 years and be driven for 240.000 km.

As can be seen, a BEV still emits 39 tonnes of CO2 over its lifetime. So, even if we switch all cars to BEVs we would still be

emissions. That's because the effects of climate change depend on the stock of emissions already present in the atmosphere not on the annual emissions. So even if we were to reduce to zero world emissions we would still be facing the effects of climate change. Moreover, western countries are now not the biggest polluters therefore

effects of climate change ( for example building better flood management mechanisms ) while we cut emissions gradually by building more nuclear power plants and by setting a foreseeable and progressively tighter emissions limit for certain types of good like cars.

Moreover, more money needs to be invested in carbon capture technologies as this looks like a more effective way to cut emissions in certain industries like cement production than other methods. Hopefully, the discussion around the environment will become more scientific and less ideological, more grounded on workable and effective policies than on wishful thinking.



Source: Polestar and Rivian

adding pollutants to the atmosphere, at a lower pace but still increasing.

This proves that we need to adapt to climate change as carbon capture technologies do not look economically viable for the foreseeable future.

Adapting to climate change simply means finding ways to reduce the negative effects of climate change. Take for example floods. Climate change makes them more frequent and more dangerous, but a flood simply remains a flood and so we should tackle the problem by building the engineering projects necessary to protect people from the water. This is a more effective way to spend money than investing in technologies like solar or wind to reduce

even if they were able to drastically cut their emissions the complete effect would be significantly more modest.

According to the Global Carbon Budget, US and the EU pollute less than China and India combined. If you considered that the Western World has been cutting it's CO2 emissions in the past decade and will continue to do so for the foreseeable future while China and India will increase their pollution levels, it's clear we need to a Green Deal for the latter mentioned counties not for the former mentioned ones.

To conclude, I believe the correct way to tackle climate change is to tackle the

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hatGPT has garnered significant attention over approximately one year since its release on November 30, 2022. At a conference this June held at the Institute for Advanced Study in Toulouse (IAST), a roundtable featuring researchers including Paul Seabright and Jean-Francois Bonnefon of TSE discussed the implications of new technology such as ChatGPT for social institutions. Furthermore, the last issue of TSEconomist, in April, featured two articles on the broad themes of advances in recent technology and how human cognizance can be simulated using computers vis-à-vis artificial intelligence (AI). One of these articles, written by ChatGPT, itself a now-popular AI chat-bot, provides a broad perspective

AI with a critical and ethical mindset, so as not to endanger individual autonomy and mistakenly perceive it as a societal panacea. This brings up an important issue – how do we regulate the applications of AI technology? How do we ensure protection against its misuse? In a society where the digital sphere is a vital lifeline for access to information, we are increasingly plagued by fake news and various agents actively trying to disseminate misinformation amongst us. For this reason, it is imperative to focus on the consequences that AI such as ChatGPT can have on human knowledge by assessing how it can be used, and perhaps just as likely misused, in research.



on this new technology by citing the abundance and equitable distribution of resources enabled by it as potentially something to be welcomed in the near future. However, it warns us to approach These questions can be tied to the broader debate surrounding the movement towards open science in academia (Ward, 2016). Open science encompasses the principle that academic research should

be available with unrestricted access to everyone. Partly led by the emergence of the internet in the late 1980s, the goal of this idea is to remove barriers to the access and distribution of knowledge for all sects of humanity. This is achieved by employing the open-access model of publishing, which lies in contrast to the traditional model of print publishing based on subscriptions (Beall, 2012). In the traditional model, authors and publishers were bound by the incentive to communicate a certain standard of research quality against the risk of losing subscribers. In the case of openaccess, subscribers are removed from the equation, and authors pay publishers a "processing" fee for their research to be distributed online for everyone to access, without a paywall barrier. Here is where the complication arises - in the absence of checks and balances provided by a subscriber base, publishers are now driven by a new incentive, which is to maximise revenue. In doing so by publishing as many articles as possible, the standard of peer-review is severely degraded. This in turn affects the incentive of scholars to publish research held to the same level of accountability, prompting the submissions of articles that are of poor quality. In the past decade, the phenomenon of "predatory publishing" has come to plague the academic world. Publishers of this nature exploit the open-access model by accepting articles for a fee without conducting any peer-review, while on the other hand, unethical researchers find these publishers a convenient outlet for poorly researched articles. Hence, openaccess inadvertently poses a danger to the integrity of the base of human knowl-

To understand the gravity of the situation, we must return to our

discussion about ChatGPT. ChatGPT's current most advanced version runs on GPT-4, a large language model (LLM) trained to identify patterns in massive amounts of textual data and generate comprehensible responses to user prompts. Conceptually, at its core, an LLM is a generative model whose purpose it is to digest all of human knowledge and be capable of analysing it (OpenAI, 2016). Already placed at the frontier of our un-

"In the absence of checks and balances provided by a subscriber base, publishers are now driven by a new incentive, which is to maximise revenue."

derstanding, the way we regulate the use of this powerful tool now will dictate how new knowledge will be assimilated in the future. Presently, two problems can be identified in this regard. The first is the issue of open-access research. Consider the following example. In the famous short story "Galley Slave" written by science-fiction writer Isaac Asimov in 1957, a robot built to proofread academic text at a university acts on its own volition to edit a professor's book and insert false information into it, ruining his career. The output of factually incorrect information by LLM are referred to as "hallucinations", and unregulated use of these models for research will severely exacerbate the problem of publishing junk science. Under the guise of obscure sophistication, a researcher making use of LLM can potentially succeed in peerreview of a paper with bogus findings and thereby corrupt the sanctity of scientific publishing (van Dis et al., 2023). Second, the closed-source nature of the data used to train LLMs like ChatGPT must be considered. Due to this, any inquiry into the degree of

credibility of information generated by LLMs cannot be undertaken. In summary, we are at a stage of infancy with regard to informing regulation for the use of LLM in research, but it is very evident that it poses a serious threat to inflate the current problem of predatory publishing. But there is a silver lining – the first step in solving a problem is acknowledging its existence. The research community has put in placeholder rules for the proliferating presence of ChatGPT in research, even to the extent of being cited as coauthor in submitted manuscripts. Firstly, websites of legitimate publishers, such as Sage Publishing, require authors to indicate the full extent to which LLMs were used in the manuscript, and prohibit their inclusion as co-author (Sage Publishing, 2023). Secondly, research-based communities such as StackOverflow, an online forum for coding queries, have temporarily banned the use of ChatGPT to answer questions on their sites for the reason that responses from LLM have an unsatisfactory rate of being incorrect (StackOverflow, 2022). Moreover, developers such as OpenAI are working on ways to digitally watermark text generated by LLMs (OpenAI, 2023). While the future of AI regulation is largely uncertain, measures like these are likely to prevent misuse of this technology in the short-term. In totality, these steps taken now represent the building blocks that will serve to inform stronger decisions designed to protect the scientific community against ever-evolving threats.

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# Retraites: La France doit-elle

# suivre le modèle anglo-saxon ?

Guillaume Yatibingui

Malgré sa forte impopularité, et les manifestations massives à son encontre, la réforme des retraites du gouvernement d'Elisabeth Borne qui prévoyait de faire passer l'âge de départ de 62 à 64 ans a finalement été adoptée. Beaucoup de débats ont eu lieu au sujet de cette réforme, et un mot entendu à plusieurs reprises, tantôt positivement, tantôt négativement a fait réagir : capitalisation. Ce type de modèle qu'on observe notamment dans le monde anglo-saxon est pour certains la solution à la crise des retraites que notre système traverse, mais pour un plus grand nombre encore, il est tabou. Dans un premier temps, décortiquons les différences entre ces deux modèles, leurs avantages et leurs inconvénients. Puis, analysons les conséquences que la France peut en tirer quant à son propre modèle de retraite.

Les deux principes qui régissent et différencient les systèmes de retraite dans les économies de marché sont bien connus : le principe de répartition que nous avons en France et le principe de capitalisation qu'on retrouve principalement en Angleterre

"Les deux principes qui régissent et différencient les systèmes de retraite dans les économies de marché sont bien connus : le principe de répartition que nous avons en France et le principe de capitalisation qu'on retrouve principalement en

Angleterre ou aux Etats-Unis."

ou aux Etats-Unis. Le premier repose sur la solidarité intergénérationnelle puisque ce sont les actifs qui financent, par leurs cotisations, les pensions des retraités actuels. Le second, plus individualiste, repose sur l'auto-financement par les actifs d'aujourd'hui de leur retraite de demain aux moyens notamment d'investissements ou de placements financiers. Ces différences dessinent les avantages et les contraintes caractéristiques des deux systèmes. Le montant de la retraite capitalisée est fonction de l'épargne investie pendant la vie active et de la performance de l'investissement tandis que dans le système par répartition, chaque actif, en fonction du montant de ses cotisations se verra attribuer un droit à toucher une pension de retraite correspondant à l'argent cotisé. Les avantages et les inconvénients principaux de ces deux systèmes sont alors clairs : dans le système par répartition, la retraite est garantie par l'Etat à travers la sécurité sociale qui la verse aux retraités après avoir perçu les cotisations sociales des actifs. Ce système est par conséquent moins sensibles aux crises et aux fluctuations économiques que le système



par capitalisation. En effet, lorsqu'un choc économique affecte financièrement le système de retraite français (le nombre de cotisants diminue avec la hausse du chômage), l'impact prend la forme d'un déficit dans le financement des retraites (moins de cotisations pour un même nombre de retraités). En revanche, lorsqu'un système de retraite par capitalisation se retrouve ébranlé par un choc économique, l'épargne consacrée à l'accumulation du capital-retraite est directement touchée (car cette épargne est investie dans des placements financiers dont la performance dépend de l'activité économique).

La capitalisation a néanmoins l'avantage de son inconvénient : une conjoncture économique florissante s'accompagne d'une hausse de l'épargne correctement investie. Le système par répartition possède également ses faiblesses, dont la principale est sans aucun doute sa sensibilité aux changements démographiques structurels de la population. Explication : Puisque ce sont les travailleurs actuels qui payent la pension des retraités par leurs cotisations, il est important que le nombre de retraités n'augmente pas trop vite pour que le nombre de cotisants puisse suivre. Or, le vieillissement de population que connaît la France a entraîné une baisse du rapport cotisants/retraités passant de 2,02 en 2004 à 1,71 en 2021 selon l'INSEE. Face à ce problème majeur, trois paramètres sont généralement évoqués pour résoudre la question du financement des retraites : diminuer celles-ci, augmenter le montant des cotisations (c'est-à-dire prélever une part plus importante du revenu des actifs pour financer les pensions des retraités), et enfin rallonger la durée de cotisation ce qui revient à faire travailler les actifs plus longtemps, et donc à décaler leur départ en retraite. Parmi ces trois paramètres, seul le premier évoqué fait porter la responsabilité du financement sur la génération retraitée. Les deux autres font reposer ce fardeau sur la « jeune » génération. C'est pourquoi il est fondamental de comprendre que le système par répartition repose sur une solidarité entre générations dans laquelle les avantages de l'une se font souvent sur les sacrifices de l'autre.

Récemment, ce fut souvent l'allongement de la durée de cotisation qui fut utilisé par les gouvernements successifs comme paramètre principal

Bien que ce système fut pendant de longues années un modèle de réussite ayant permis de changer l'image de la retraite perçue comme un retour à la misère, ce modèle est aujourd'hui menacé par les transformations démographiques que connaîit le pays. Il est certain que les Français sont attachés à leur système de retraite, et que tout gouvernement prenant le risque de le réformer de façon paramétrique ou structurelle s'expose à un risque élevé d'impopularité comme on l'a vu récemment. Mais la capitalisation est un mot qui revient souvent sur le devant de la scène lorsqu'il s'agit de résoudre les problèmes de notre système de retraite, notamment chez certains économistes libéraux comme Jean-Marc Daniel. Précisions également que même si fortement minoritaire, la retraite par capitalisation existe déjà en France notamment chez les fonctionnaires en complément de la retraite de base, et également sous forme d'assurance-vie, outil de plus en plus populaire chez les Français.

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La retraite par capitalisation est donc déjà dans les débats, certains considèrent même que le Président de la République Emmanuel Macron cherche à orienter la France vers ce type de système dans le futur à travers sa réforme hautement impopulaire. Certains le redoutent, d'autres le voient comme une solution viable pour remplacer un modèle archaïque, déficitaire et injuste pour la jeune génération qui constitue son socle. Mais qu'en est-il de ce système dans les pays où il a été mis-en-place ?

Il se trouve que lorsqu'on s'intéresse aux pays anglo-saxons où la retraite fonctionne par capitalisation comme le Royaume-Uni, les Etats-Unis ou la Nouvelle-Zélande, on constate que ces pays font face à une crise de l'épargne consacrée à la retraite. Explications : Puisque la capitalisation suppose pour chaque individu de constituer sa retraite future en épargnant tout au long de sa vie active, il est important que le montant de cette épargne soit suffisant pour garantir un niveau de vie correct à l'âge de la retraite. Or, plusieurs études économiques notamment aux Etats-Unis ont pointé l'insuffisance de cette épargne consacrée aux retraites dans les choix des individus. En 2010, 53% des Américains seraient susceptibles de ne pas maintenir leur niveau de vie après la retraite en raison d'une épargne insuffisante contre 31% en 1983. 78 millions n'ont pas de plan de retraite proposé au sein de leur entreprise. Beaucoup n'ont pas les connaissances suffisantes pour choisir eux-mêmes où placer leur épargne retraite, d'autres gagnent trop peu pour se permettre d'épargner suffisamment, d'autres encore commencent trop tard à épargner pour leur retraite. En conséquence, 50% des Américains en âge de travailler ont un solde inférieur à 3000\$ sur leur compte épargne consacré à la retraite. Cette faible quantité d'épargne se traduit souvent par une précarité au moment de la retraite, et il n'est pas rare de voir des seniors continuer de travailler dans des conditions difficiles passé un certain âge. Par ailleurs, il ne faut pas oublier que l'épargne étant essentielle à l'investissement, stimuler celle-ci demeure important pour la croissance économique.

Pour pallier ce manque d'épargne retraite que connaissent les pays ayant recours au système par capitalisation, des solutions visant à inciter les agents à épargner davantage ont été mises -en -place récemment comme les Auto enrolment pension schemes. Il s'agit de plans de retraite géré par une entreprise dans lesquels tout employeur répondant à certains critères est automatiquement enregistré. Au Royaume-Uni, où ce type de plan de retraite existe depuis 2012, tout employé d'au moins 22 ans travaillant sur le territoire national et gagnant au moins 10 000£ par an est automatiquement enregistré dans le plan de retraite de son entreprise. Une fraction de son salaire est ainsi placée dans le fond d'investissement de l'entreprise, à laquelle s'ajoute la contribution de l'employeur et de l'Etat à la retraite de l'employé. Le tout est ensuite investi. Ce type de système incite directement à l'épargne en évitant les contraintes administratives et le temps de recherche qu'un travailleur passerait pour trouver un plan de retraite. Ces plans d'enrôlement automatiques ne suffisent pas à eux-seuls pour résoudre la crise du manque d'épargne retraite, mais constituent une partie de la solution ;, c'est pourquoi ils sont de plus en plus populaires dans le monde.

Il paraît donc peu souhaitable pour la France de remplacer son système de répartition par un système de capitalisation lorsqu'on voit les problèmes auxquels les pays qui ont adopté ce dernier font face. Par ailleurs, ces pays ont un âge de départ à la retraite plus élevé que le nôtre : à partir de 2034, il sera de 68 ans au Royaume-Uni pour une retraite à taux plein. Notons également qu'il n'est pas évident de passer d'un système à un autre sans spolier totalement une génération. En effet, si demain la France décidait de passer à un régime de retraite par capitalisation, alors les nouveaux actifs devraient cotiser pour leur propre retraite. Par conséquent, qui paiera les pensions des actuels retraités ? Enfin, il est évident que les Français étant attachés à leur système actuel de retraite, il serait suicidaire pour un gouvernement de suggérer son remplacement par un système par capitalisation, surtout lorsqu'on voit ce que ce type de système a comme défauts dans les pays où il a été installé.



" En 2010, 53% des Américains seraient susceptibles de ne pas maintenir leur niveau de vie après la retraite en raison d'une épargne insuffisante contre 31% en 1983

Il est cependant prématuré de jeter la capitalisation à la poubelle. Même si elle reste encore aujourd'hui un tabou en France, elle existe déjà sur notre territoire. Il peut donc être intéressant de la développer dans une certaine mesure pour ceux qui ont les moyens de se constituer une épargne retraite, notamment les

ménages les plus riches, afin que la retraite par répartition profite essentiellement à ceux qui n'ont pas cette capacité d'épargner suffisamment pour leur retraite. Cela ne sera certainement pas suffisant pour pallier les difficultés structurelles auxquelles notre système de retraite est confronté, mais suivre le modèle anglo-saxon reviendrait à guérir le mal par un remède plus toxique encore. La France possède l'un des systèmes de retraite les plus généreux au monde, avec un niveau de vie de ces derniers supérieur à ceux des autres pays et un âge de départ encore inférieur à ceux de la plupart de nos voisins européens, et cela même après la réforme de 2023. Ce modèle français a mis fin à l'époque où la retraite était associée à la précarité. Il s'agit de sauver ce système, et non de le remplacer, la capitalisation doit rester fortement minoritaire. Les solutions sont à chercher du côté de la politique démographique, de la politique de l'emploi, dans l'âge de départ, le montant des pensions, les impôts etc... Le tout est de travailler sur tout ou partie de ces paramètres de façon à garantir un système qui soit le plus juste possible, faute de quoi la popu-

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lation sera toujours réticente à l'adopter.

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# ON CAMPUS



# Associations at

# Toulouse School of Economics

A guide to fun-filled activities and engagements at TSE





Are you ready to make the most out of your college experience? Look no further than the Students' Office (BDE TSE) – the ultimate association dedicated to electrifying your student life!

At BDE TSE, we pride ourselves on creating unforgettable moments filled with cultural outings, thrilling parties, exciting partnerships, and loads of goodies. But it's not just about having a blast – we're all about fostering a sense of belonging and inclusivity among every single student, whether you're a newcomer, an international student, or a veteran

Picture this: after a demanding day of classes, you gather with fellow students, enjoying and forming connections that will last a lifetime. With our diverse range of events, from epic movie nights and laid-back after-work gatherings to those highly coveted integration weekends and our legendary Gala, there's always something to look forward to!

This year's BDE TSE board is led by Marie Piniello as the President, Théo Spérandio as the Vice-President, Ambre Boivin as the Secretary General, and Anna Blanpied as the Treasurer. They are ready to make your time at college extraordinary! So, don't miss out on the fun and excitement – join us now! Follow our Instagram page for all the latest updates and thrilling surprises we have in store for you. Together, let's make your stu-

Say it Aloud TSE is the power of speech.
Step into a world where your words command attention.
Welcome to the public speaking student association of TSE.

Our mission is to provide a platform for students to have discussions on topics of their interest, share captivating ideas, and foster a culture of learning and sharing through public speaking.

We hold dynamic weekly gatherings and host interactive workshops, debates, and creative games designed to improve your public speaking skills and eloquence. We also organize conferences with distinguished speakers around topics relevant to us as aspiring economists, spanning an array of subjects chosen by participants.

Say it Aloud empowers you to take the spotlight of a presentation, excel in interviews, convince crowds, or simply be more confident when speaking publicly.

Join us and be a part of this amazing community. Connect with us on Instagram and LinkedIn. ■

See you there!

dent life an unforgettable adventure!





This association was set up to bring students together for sporting activities. The BDS (Bureau des Sports) offers a variety of activities so that everyone can exercise in a spirit of conviviality.

Starting this year, the BDS wants to organize a new main event called "La Nuit des Sports". The idea is to bring together several sports (soccer, volleyball, basketball ....) for one evening. There will also be a refreshment bar and food. We look forward to seeing you there!

Other events are planned throughout the year, such as a laser game and soccer, a very popular event for students! What's more, the BDS regularly organizes social events to encourage friendly interaction (table soccer, belote tournament...). Last but not least, you'll be able to see your favourite TFC and Stade Toulousain players.

What's more, students will have the opportunity to buy special gifts, and we're also organizing a competition to win some of them.

These events and activities are open to the whole school community, so you can meet Bachelor, Master and PhD students, as well as members of the TSE Alumni network!

a TSE Junior Etudes s'inscrit dans le premier mouvement étudiant français. De leur diminutif J.E., les Junior-Entreprises sont plus de 200 en France. Celles-ci mettent en relation entreprises et institutions avec des intervenants de leur école, elles fonctionnent ainsi comme de réelles entreprises.

La TSE Junior Etudes est spécialisée dans 4 domaines de compétences enseignés à TSE : Macroéconomie, Economie environnementale, Economie industrielle et IA & Datascience.

Au sein de cette association, les membres actifs s'engagent dans la gestion et le développement de l'association en intégrant l'un des cinq pôles. Il est également possible de participer en tant qu'intervenant ponctuel sur des missions variées en lien avec les domaines évoqués. Ces missions sont rétribuées, ce qui offre une opportunité concrète de mettre en pratique les connaissances théoriques.

Faire partie de la TSE Junior Etudes représente une excellente opportunité pour les étudiants d'entrer dans le milieu professionnel en développant leur réseau mais également une expérience humaine inoubliable."



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# Internship Report

### Where did you do your internship and what were your tasks?

I am currently working at Assurance Maladie, the national health insurance. The role of Assurance Maladie is to cover medical bills. I am a Data Analyst specialized in risk management within l'Assurance Maladie. My day to day work consists in answering requests from the director or executives such as how the change in the legislature will impact some people or see if some doctor may be committing fraud. An other mission I had was to create a dashboard to follow expenses over the year and another one to follow monthly expenses. To do so, I use SQL Oracle to extract data from our database and Excel to clean and present them. Honestly, the requests are quite basic, but the main challenge is in properly choosing a variable within the right table. Thus, it often results in meetings with different departments to really understand what they want, how they want it presented in order to really understand the whole mission.

# How did your studies at TSE help you during your internship?

I essentially use L3 courses such as SQL or statistics and some classes from M1 as well such as Econometrics. However, if I could I would have taken Data Bases in M1, it would have been very useful in my current position. Working in large case teams and communication was important for a successful finishing of an analyses or reports.

How did you get your internship? What would be your advice for students looking for a similar internship?

I got my internship thanks to the TSE Alumni job board. It is very useful because you can have the recruiter's email and your

# Pierre Rossignol

application go straight to their mail box. Furthermore, if I had an advise it would be to target companies at the BND, they pay to come see us, they know what we are worth. Otherwise, for my M2 internship, I will definitely use LindkedIn extensively because you can connect with the recruiter, ask additional question for information that are not displayed on the post, or even reach out to professional in a field you are interested to work in or want to learn more about. If you are lucky enough, they may even reference your application from within the organization.



# **Hugo Chaubet** Internship Report

# Where did you do your internship and what were your tasks?

I was an intern data consultant at AVISIA. It is a consulting company whose aim is to put the data in the center of their project, in order to answer business problems from the customers.

As far as I am concerned, I was assigned to a mission in a retail company. My task was to create a dashboard with the aim of enabling teams to steer the business. I had several indicators imposed to compute, concerning different types of services proposed by the company. In order to do this, I had differents sources of data: Google Analytics, Getfeedback marks and manual data. To compute these indicators, I used the Google Cloud Platform's tool BigQuery to extract the metrics from data sets by using SQL

Then, I had to present these indicators on a dashboard as clearly as possible in order to summarize the activity of the different services. For this task, I still used a GCP tool which is Looker Studio to present my results.



# How did your studies at TSE help you during your internship?

During my internship, the option of M1 Econometrics and Statistics, Data bases benefited me a lot. Firstly I used a lot of SQL queries in my work and following this course was very useful to improve my skills quickly and answer the demands of the customer.

This course has also been useful, because I had to write a documentation for my dashboard, to allow the teams which will work on my project in the following years, to understand how I constructed my tables of data and how to use the dashboard. Thanks to the Data bases I had in class, I already knew how to construct a relational schema and a data mart, which was really helpful.

How did you get your internship? What would be your advice for students looking for a similar internship?

I knew the company in which I did my internship thanks to the Business Networking Day of TSE. Then, I waited for the announcement of an M1 internship on their website and I applied to their offer.

If I had advice to give to students who want to work in the same field as I am, I would tell them that it is important to master the softwares that we work in class, because it would always be useful in the future. And finally to take advantage of the TSE alumni network which is full of offers in this type of job.

# Internship Report

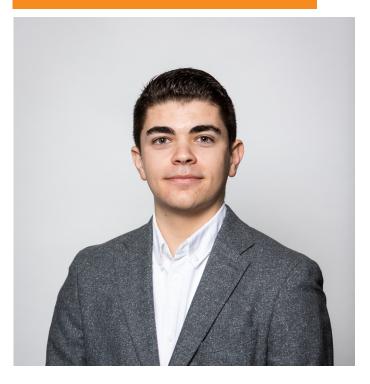
# Où avez-vous effectué votre stage et quelles étaient vos missions?

Mon stage s'est déroulé au sein de l'ACPR (Autorité de Contrôle Prudentiel et de Résolution), l'autorité chargée de veiller à la stabilité financière au sein de la Banque de France. Plus précisément, j'ai travaillé avec les agents du service d'études statistiques, dont leur rôle est de produire des tableaux de bord et synthèses sur la situation des secteurs bancaires et assurantiels, particulièrement en France. Ma mission a consisté à exploiter des données produites par l'INSEE sur le patrimoine des ménages, afin d'étudier le profil des détenteurs d'assurance-vie en France ; ce qui a donné lieu à la rédaction d'un article académique mais aussi de plusieurs notes. Ainsi, en tant qu'économiste-statisticien, j'ai eu à mener des analyses statistiques, économétriques mais aussi à gérer une grande quantité de données. En effet, en plus du traitement des données visant à les rendre exploitables, mon rôle a été de produire un ensemble de supports graphiques afin de permettre à tous les agents de les visualiser facilement et ainsi de pouvoir comprendre la situation des ménages détenteurs d'assurance-vie et les grandes évolutions observées ces dix dernières années. Enfin, j'ai été amené à répondre à des demandes ponctuelles à l'aide de mes données pour aider les équipes dans la rédaction de leurs rapports d'analyses.

# En quoi vos études à TSE vous ont aidé pendant votre stage?

Etudier à TSE m'a beaucoup aidé afin de remplir au mieux mes missions. Tout d'abord, j'ai découvert le travail d'un économiste lors des divers projets menés en licence 3 (Apprentissage Par Projets) et Master 1 (Applied Econometrics) que j'ai pu mettre directement en application durant mon stage. En effet, la méthode inhérente à la rédaction d'un rapport académique est précise et méticuleuse, mais grâce à TSE nous avons l'expérience nécessaire pour être tout de suite opérationnels et concis. De plus, l'apprentissage des langages de programmation (R, Stata) a été indispensable pour pouvoir mener à bien mes missions, étant donné que ces outils sont utilisés au quotidien. Les connaissances théoriques acquises en économétrie, statistiques et microéconomie m'ont également permis de poser un cadre rigoureux à mes analyses. Enfin, la rigueur et le sens du bien commun au cœur des valeurs de TSE ont été au centre de ma démarche.

# Léo Cappuccia



Comment as-tu trouvé ton stage? Quels seraient tes conseils pour des étudiants à la recherche d'un stage similaire ?

J'ai obtenu ce stage en candidatant sur le site de la Banque de France. Dans mon dossier, ce qui a particulièrement attiré l'attention du recruteur a été l'expérience acquise lors des projets d'études menés, mais aussi la variété de logiciels maîtrisés et les bonnes connaissances quantitatives qui font la réputation de TSE. Ainsi, les étudiants de TSE sont particulièrement appréciés et ne doivent pas hésiter à candidater. En revanche, une bonne connaissance de l'institution (qui peut être acquise facilement sur le site de l'ACPR et de la Banque de France) est indispensable et permet de se démarquer des autres candidats.

# Internship Report Mattéo Guillemard

# Où avez-vous effectué votre stage et quelles étaient vos missions?

J'ai été chargé de réaliser une étude statistique sur le profil et le parcours scolaire des élèves de 3ème de l'académie, et plus particulièrement sur deux dispositifs : les 3ème Segpa (accueillant des élèves en grande difficulté scolaire) et les 3ème Ulis (accueillant des élèves en situation de handicap). Mon travail a tout d'abord consisté à me documenter sur les problématiques et spécificités de ces dispositifs et du domaine de l'éducation. Après cela, de nombreuses bases de données m'ont été confiées comprenant des informations sur tous les élèves de l'académie, que ce soit à propos de leur scolarisation ou de leurs résultats aux examens pour chaque année. À l'aide de mes compétences sur R, j'ai appareillé ces bases à l'aide des informations de chaque élève afin de pouvoir retracer précisément leurs profils et leurs parcours scolaires jusqu'à leur éventuelle diplomation au baccalauréat. Cela n'a pas été sans difficulté car les bases de données comprenaient de nombreux obstacles (doublons, informations manquantes, etc.). Une fois les bases appareillées, créées et nettoyées, j'ai exploité les données afin d'extraire les informations les plus pertinentes possible et de concevoir des graphiques précis. J'ai finalement rédigé entièrement deux notes qui, après relecture, seront publiées par le rectorat début septembre et diffusées à tous les établissements de l'académie ainsi qu'à de nombreux acteurs liés au système éducatif. L'académie de Versailles est la plus grande de France avec plus de 1,2 millions d'élèves.

# En quoi vos études à TSE vous ont aidé pendant votre stage?

Les cours de programmation, notamment ceux sur R, m'ont particulièrement aidé dans ce stage. Les méthodes de traitements et d'analyse de données m'ont également permis de tirer des conclusions intéressantes. J'ai pu expérimenter quelques modèles économétriques qui se sont révélés pertinents pour



mes supérieurs, mais difficilement exploitables pour une note à destination d'un public qui n'est pas familier aux méthodes statistiques.

Comment as-tu trouvé ton stage? Quels seraient tes conseils pour des étudiants à la recherche d'un stage similaire ?

J'ai candidaté sur https://www.pass.fonction-publique.gouv.fr/ où j'ai trouvé l'offre de stage. Après un entretien où quelques questions sur R m'ont été posées, j'ai été pris. Ce site est vraiment parfait si vous recherchez un stage dans le secteur public.

# Gap Year Report

# Coralie Sorbet

# How did you choose the host organization for your gap year?

My first objective for this year was to improve my English level and to obtain the TOEFL to do an international master. Therefore, I wanted to go to an English-speaking country and the city of Reading was perfect for me. Indeed, Reading is quite a small city but not far away from London so we could go there on weekends easily. Also, I knew that in this university it was super easy to make new friends with all the societies and events organized by the university, and so it was perfect to practice my English. Indeed, the campus of the university is like a small town. There was everything needed, such as a gym club, a night club, a pub, a cafeteria, a supermarket, accommodation and more. Besides, the city of Reading has a good network of buses and trains which is very useful to travel or to visit British cities.

### Was your experience a plus in your formation?

This experience was a real plus in my formation: my English level has been improved, and I have learned more about myself. Indeed, now, I know that I can live by myself in a foreign country without knowing anyone at first. I have also discovered a new culture and people from all around the world. Furthermore, the courses that I have taken were in link with TSE, so I have increased my knowledge. Finally, I got the necessary score at the TOEFL required by TSE and I can do the formation that I wanted to. This year was, therefore, very enriching and I would do it again if I could.

# How was your experience adapting to life in the host country and working with this organization?

To adapt to life in the United Kingdom, the university helped us a lot. Before our arrival, they sent us many emails with important information about visas or living costs. We were not let on our own and they were present in case of any need. Moreover, there were halls in the university, a shared accommodation for students only, and, as we were Erasmus students, we were given the possibility to live there during the year. This made my research much easier. They also explained to us how to work as foreigners in the United Kingdom and helped us with our research: many jobs were offered in the university but also in the city center.



# Gap Year Report

# How did you choose the host organization for your gap year?

I chose to spend a semester at the Rotterdam School of Economics mainly because of the courses available to exchange students. I wanted to deepen my knowledge of behavioral and experimental economics, two areas of interest to me that I didn't have access to at the advanced level at TSE. Because I was motivated by the courses and what I could learn, I considered Erasmus University, where the Rotterdam School of Economics is located, as my first choice because of its ranking as a very good university in Europe. I also chose the Netherlands because I've always wanted to visit this country and I really like Northern Europe.

# Was your experience a plus in your formation?

I learned to be totally independent in another country, which was important for me as I'm originally from Toulouse and up until now I've done all my studies in the same city, so I wanted a change of scene. Moreover, the courses I took were very useful for the internship I did after my semester in Rotterdam as a research assistant in the behavioral and experimental economics laboratory in Lyon, France, as well as helping me to choose my future direction in terms of the areas of economics I would like to work in.

# How was your experience adapting to life in the host country and working with this organization?

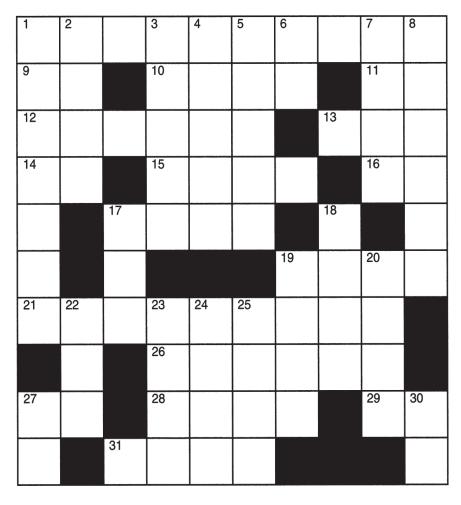
The Netherlands is not very different from France, so adapting was pretty easy. There are a lot of very welcoming internationals, and everyone speaks English, so language is not a problem. The university has many activities you can take part in, as well as the ESN association, which makes for a rich social life. In addition, the university and the exchange service are very well organized and helpful in many ways (accommodation, planning,

# Ariane Bontems

administrative procedures).

It was difficult to find accommodation, especially as I only stayed for 4 months and most landlords or housing organizations require a minimum stay of one year. Housing contracts are different from French contracts in that you have to agree the length of stay in advance, which means that if you have signed a one-year contract, you cannot leave for another year. Some private landlords may allow you to find someone to replace you in case you need to leave before the end of the contract, but I would advise you to discuss this possibility before signing anything. Almost all accommodation is shared, and rents are quite high (same level as in Paris). I found my room on a Facebook group, there are a lot of very active ones, and it's a good place to find a room, but you have to be VERY careful about scams as there are a lot of them.





# Across

- 1. Coldest continent
- 9. Missouri (abbr.)
- 10. Brave; confident
- 11. Preposition
- 12. Continent
- 13. Organ of hearing
- 14. Registered nurse (abbr.)
- 15. Intensifier
- 16. Eleven (Roman numeral)
- 17. Table for writing or studying
- 19. Sodium bicarbonate; carbonated water; soft drink
- 21. Island continent
- 26. Without difficulty; with facility; in a smooth, free manner
- 27. 1st person pronoun
- 28. Dry; lacking moisture; parched by heat
- 29. Thus, in the same manner or way; to a great extent or degree
- 31. Region; extent of space or surface; scope

### Down

- 1. Second word of two continents
- 2. Part of speech
- 3. Over; on top of; higher than
- 4. Heavy cords; twisted or braided strands of fiber
- 5. An office worker who keeps accounts and records; a salesperson in a store or shop
- 6. Touchdown (abbr.)
- 7. Persuade by kindness, patience, or flattery
- 8. Second largest continent
- 17. Negative prefix
- 18. Bubble up; reach the temperature where a liquid changes to gas
- 19. Past tense of slide
- 20. 24-hour periods
- 22. Employ, utilize
- 23. Pull apart or to pieces; damage by pulling sharply; drop of salty water coming from the eye
- 24. Unusual; uncommon; not often occurring
- 25. Largest continent
- 27. Possessive pronoun
- 30. Correlative of *either*; function word used to indicate an alternative

Crossword coutesy: American English Website

