

NEW
FORMAT

SE MAG

Learning paths: The world of work



The world of work



Setting out

What are we working for? | 5
How work brings humans together | 6

INEQUALITIES

In the shadows of war | 17
Why don't more women become economists? | 18
Does networking keep men ahead? | 21
Why do working moms pay a heavy price? | 23



PENSIONS

The myth of gender-neutrality | 25
A delicate balance | 26



TRAINING

Get on the right track | 9
Preparing future economists | 11



FUTURE OF WORK

Will AI take my job? | 29
Hello? This is AI calling... | 32
My coworker, the robot | 33



NAVIGATING

Should I stay or should I go? | 13
France's troubled labor market | 15



In essence | 34

Publication Director:

Christian Gollier

Editor in chief:

Jennifer Stephenson

Production Manager:

Tiffany Naylor

Managing editor:

Caroline Pain

Reporting & editorial

contributions:

James Nash

Design and illustrations:

Atelier La Botte

Photos:

Studio Tchiz,

Fonds Académie François

Bourbon



4000 printed magazines

ISSN: 2554-3253

This magazine has been funded by a French government subsidy managed by the Agence Nationale de la Recherche under the framework of the investissements d'avenir programme reference ANR-17-EURE-0010.

Bibliography:

Visit tse-fr.eu/tse-mag to find out more about the research illustrated in this magazine.



A life of toil

Our working lives have changed radically in recent years. New tech and Covid lockdowns have broken down traditional barriers and enabled the rise of online education, gig economies and remote working. Aging populations are weighing on our pension systems, while the potential benefits of AI for firms and workers are matched in scale by anxieties about job losses and societal upheaval.



CHRISTIAN GOLLIER

Director of the Grand Établissement
Toulouse School of Economics

In this first issue of the new TSE Mag, our experts plot a path through complex workplace challenges such as how to deal with discrimination or robot coworkers. We hope to engage with all readers who are navigating the world of work and provide guidance to individuals and society for key choices about education, careers, pensions and the digital revolution.

OUR NEW SCIENCE MAGAZINE.

This relaunch of TSE Mag is dedicated to younger generations. We hope our new format will inspire, educate, and energize the decision-makers of the future. In line with TSE's focus on the common good, each issue will aim to increase scientific awareness and understanding on a specific topic, sharing the insights of our world-class researchers and the wider TSE community.

Setting out

What are we working for?



MARCEL BOYER

Work can mean many things, shaping our identity and life chances. Some people might treat it as a chore, a challenge, or an obsession – but economists view it as a market. To kick off our special issue on the world of work, we spoke to TSE associate Marcel Boyer (Université de Montréal) about how to get ahead in today's fast-changing professional landscape. He explains why our success as individuals and societies depends on a healthy blend of competition and cooperation.

WHY SHOULD I GET A JOB?

A job is one way to contribute to society, and to the welfare and happiness of other citizens. As an employee, you are compensated for your contributions by your employer, who is responsible for producing and delivering goods and services of value to customers, individuals or corporations. Wages can take many forms, including insurances, pensions, training, growth prospects, and benefits related to location and stress. Your overall compensation rests on the value or utility of goods and services marketed by your firm; and your relative contribution to those goods and services.

HOW DO I IMPROVE MY VALUE TO EMPLOYERS?

There are two ways to improve your compensation: raise the quality of products you are producing; or raise your relative contribution by acquiring valuable skills. Every human being is the owner of human capital that can be developed and marketed in different ways. We all invest in, produce and supply some form of this resource. Your specific human capital is a matter of choice and opportunities. Given your particular portfolio of skills and knowledge, there will be numerous jobs and employment statuses available, close by or far away. Your flexibility and dedication in searching for opportunities are significant factors in improving your human capital value. →

HUMAN CAPITAL refers to the economic value of a worker's experience and skills. It includes assets like education, training, intelligence, skills, health, and other things employers value, such as loyalty and punctuality.

»» HOW CAN I KEEP UP WITH A CHANGING JOB MARKET?

Technological change and the discovery of better ways to produce and deliver goods and services involve creative destruction: jobs are lost to allow better jobs to be created. This is one of the main engines of economic growth and improvement in social wellbeing. But the speed of change is also a source of concern. The process will destroy some forms of human capital, while making others much more valuable. It is important for people to be aware of these socio-economic movements that result from myriad decisions by individuals, firms, and other organizations. We must strive to learn new skills and adapt our human capital to an ever-evolving market.

SHOULD GOVERNMENTS MAKE FIRMS PAY US MORE?

It is natural for a government to want to increase wages. Workers vote. Capital doesn't. But the real source of economic growth is not low prices and high wages but the right prices and right wages; that is, competitive prices and wages that send the right signals of scarcity to workers,

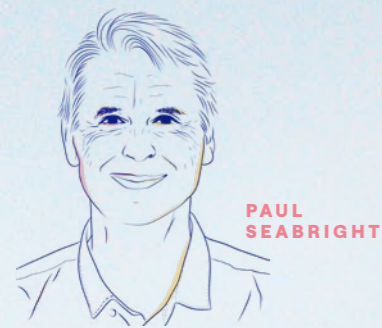
consumers, buyers, sellers, and producers. Tampering with competitive prices and job creation ultimately destroys social value and wealth.

Job losses may be as important as job gains for the process of net job growth. The proper policy is not to protect jobs per se, but to help individuals and firms to adapt. Government interventions to hold back creative destruction will hurt wage growth, productivity, and increase prices for consumers.

WHAT LESSONS DOES ECONOMICS HAVE FOR STUDENTS AS THEY ENTER THE WORLD OF WORK?

Professional relationships with employers and fellow workers require discipline and dedication. Teamwork is the key concept. It can be stressful but also energizing. This is true on a larger scale too.

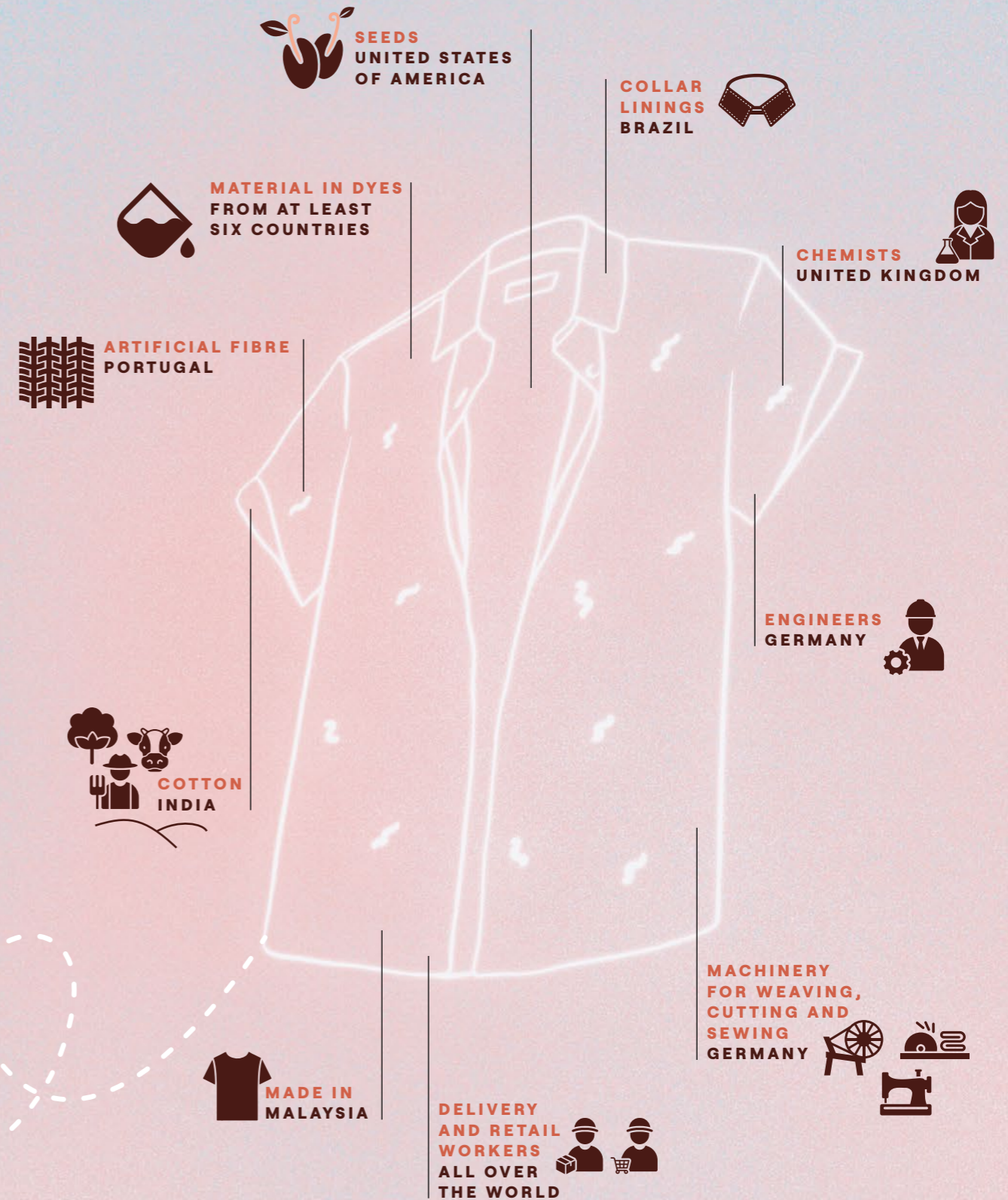
To better understand the intricate web of relationships humans have developed, write a list of people who have worked for you and contributed to your wellbeing today. You will need many years to complete it. Paul Seabright weaves a beautiful story of how a shirt is produced by this amazingly ordered mesh of "collective intelligence".



HOW WORK BRINGS HUMANS TOGETHER

“This morning I bought a simple shirt – without informing anybody in advance – that represents a triumph of international cooperation. It was made up in Malaysia, but the materials and machinery come from at least 11 countries including India, the US, Portugal, Brazil, and Germany. Engineers in Cologne and chemists in Birmingham began the preparation many years ago, well before an Indian farmer led ploughing bullocks across his land. All these people have been working without knowing or caring about the 20 million people of widely different sizes, tastes and incomes who decided to buy shirts at the same time as I did. Tomorrow there will be another 20 million – perhaps more.” ●

Edited for length, this quote is from the TSE professor's 2010 book 'The Company of Strangers'.



TRAINING

How can we adapt to the pace of change as technological advances reshape global labor markets? TSE is committed to preparing a future-ready workforce by investing in continuous learning and professional development. In this section, we underline the pivotal role of students' educational choices.



Get on the right track

Have you followed your dreams? Are you worried that your life is on the wrong path? The decisions we make in high school have major implications for our future. TSE assistant professor Olivier De Groot draws on his research in Belgium to offer advice for students, parents and policymakers on how to make the best educational choices.

SHOULD STUDENTS' PATHS BE DETERMINED BY THEIR GRADES?

We should ideally give students many options, based on their preferences and ability, without placing unrealistic demands on those who are insufficiently prepared. A lot of the required skills for certain educational tracks are developed before high school: ignoring this can have important consequences, including the likelihood that students will repeat a grade or drop out.

In the Belgian/Flemish context I study, grading standards prevent students from moving to the next grade in certain tracks. This diverts many students to tracks that are better suited to their ability. Students in Belgium are less constrained than in many countries where track choice restricts higher education options. Nevertheless, my research shows that a more academic track has a causal impact on overall higher education enrollment and graduation, but that does not mean it is the best choice for everyone.

I find that underperforming high-school

students often repeat grades, ignoring advice to switch to a different track. This is costly for them and for society but does not lead to better educational outcomes. A less academic track can prepare students well for several options later in life, such as specific jobs that do not require a college degree. It can also provide more specialized training for specific programs in higher education. If the goal is to increase academic graduation, we should prepare students better before high school instead of using grade repetition.

We see many other mismatches that better guidance could reduce. In Belgium, educational outcomes are slightly better at the more elitist schools that only offer the most academic track. But many students in elite schools would be better off in more comprehensive schools that offer multiple tracks. And vice versa. →

Preparing future economists

The TSE experience

JOSEPA MIQUEL-FLORENSA

Director, Master in Public Policy and Development

“Our program prepares students to analyze real-world policy questions. It combines economic theory, state-of-the-art applied micro-econometric techniques on program evaluation and political economy.”



TSE alumni learning skills for life

NIKOLAOS PAPOULIAS

Master in economics of global risks

“I learned to efficiently manage multiple projects simultaneously. Working in multicultural environments, I was able to appreciate the value of diverse perspectives.”



The Professional Development course taught us how to write CVs and cover letters, and how to face video interviews via online hiring platforms. I also participated in careers workshops on salary negotiation, stress and conflict management. The careers staff are always available to help. Their Business Networking Day is a great opportunity to connect with employers.”

CHLOÉ DESRUET

Master in econometrics and empirical economics



“The master’s program was very serious, allowing theory to be applied to real life. I learned to find solutions by developing my analysis ability. Being a TSE graduate definitely played a role in securing both my internship and my current position: TSE is well known among economists and provides the skills that employers are looking for.”

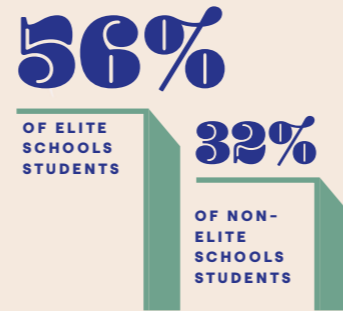
»» DO SOCIAL CLASS AND GENDER GIVE STUDENTS UNFAIR ADVANTAGES?

In elite schools, 56% of students have a mother with a higher education degree, compared to only 32% in non-elite schools. As school choice is free in Belgium, this is driven by parents’ choices. This is not always ideal, as elite schools are more beneficial for children without highly educated parents. Students without highly educated parents tend to be on less academic tracks and perform worse in high school, which partly explains why children who have a college-educated parent are more than twice as likely to obtain a college degree. The best way to reduce this socio-economic status (SES) gap is to improve students’ skills before high school; for instance, by investing in early childhood education. If initial math and language skills are equalized, it would reduce the SES gap by half.

The other half could be due to different preferences for academic programs and for college itself, or differences in other skills.

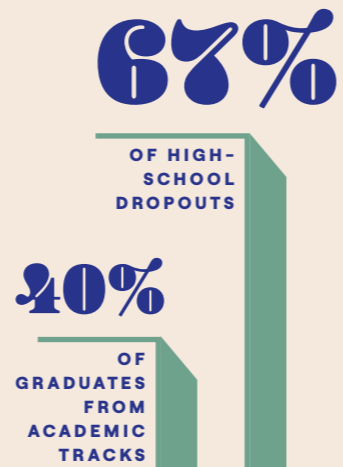
There are also significant gender gaps. Boys make up only 40% of graduates from academic tracks, but 67% of high-school dropouts. They also more often opt for math-intensive programs.

Children
+ College-educated parent
x2 More likely to obtain college degree



have a mother WITH A HIGHER EDUCATION DEGREE

boys REPRESENT



SHOULD WE BE ENCOURAGING MORE PEOPLE TO GO TO UNIVERSITY?

Not necessarily. In terms of wages, we know that a college degree is beneficial on average, but not for everyone. Some students also dislike long studies. It’s important that students are well trained for the jobs of today and the future, and choose the option in which they have the comparative advantage. For many, this could be good vocational high-school training. ●

For more data on this topic, check out Olivier’s research: tse-fr.eu/tse-mag

HOW TO GET YOUR DREAM JOB?

As we enter a new era as a *Grand Établissement*, TSE is investing in new teaching programs for its 2,400 students. Our experts take great pride in preparing the economists of the future, nurturing their analytical and problem-solving skills in cutting-edge domains that include environmental economics, ecology, public policy and development, competition law and regulatory policy, digital economics, and data science.

To navigate today’s competitive job market, our students benefit from high-quality professional development services, such as coaching, workshops, presentations, on-campus recruiting, and databases full of jobs and internships. As well as individually tailored career guidance, we offer access to a growing alumni network that offers graduates support and job opportunities around the world. ●



As the global economy undergoes rapid transformation, the days of permanent contracts and ‘jobs for life’ may be numbered. Successful navigation of new labor markets will require fleet-footed flexibility from job seekers, employees, businesses, and policymakers. In this section, our researchers consider the importance of career mobility and how to build an optimistic, agile workforce that is fit for the 21st century.

Should I stay or should I go?



EUGENIA GONZALEZ-AGUADO

When is it time to change job? Which type of contract is best?
 Assistant professor at TSE, Eugenia Gonzalez-Aguado explains how our entire careers can be shaped by the laws and institutions that govern labor markets.

HOW SHOULD STUDENTS PREPARE TO NAVIGATE THEIR PROFESSIONAL CAREERS?

Finding a job that fits is often a process of trial and error. This is especially true at the beginning of working life when we have less information about our skills, the skillset required for different jobs, and our tastes. It is also when firms start to learn more about a worker, as they gain experience. It’s a two-way matching process for both workers and firms.

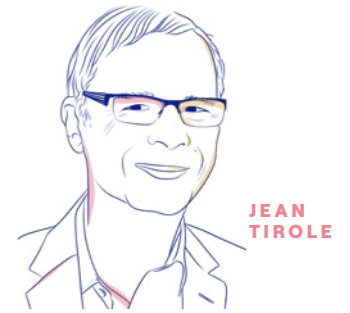
Students should be open-minded about which jobs are a good fit: your first job is unlikely to be your ideal job. They should also pay attention to the general economic conditions and trends about what kind of skills are required. For example, over the past decade we have seen a rise in demand for data analysis or computational science. →



An average of 1.2 years for employees aged 20 to 24, compared to 4.7 years for those aged 35 to 44.

Source: Bureau of Labor Statistics for January 2022

France's troubled labor market



JEAN TIROLE

» IS IT BETTER TO STICK TO THE SAME OCCUPATION OR EMBRACE CAREER MOBILITY?

There are many different scenarios in which workers change occupations. In most cases, it is after being unemployed. The young tend to change occupations more often: with experience, they learn about their skills and what kind of jobs are more fitted for them. When considering a different occupation or industry, workers face a critical trade-off. There is plenty of empirical evidence about the advantages of staying put. For example, we see large increases in wages for workers that stay in the same occupation relative to those who don't. These returns may come from learning on the job.

Alternatively, workers may believe their skills or preferences are not well aligned with their current occupation. Changing careers may then offer the possibility to find a better match, improving their productivity, wages, and conditions such as job security and flexibility. In the data, we observe that unemployed workers who change career are less likely to fall back into unemployment.

Career mobility tends to follow ups and downs in the economy. During booms there are more jobs available so workers might find it easier to move, whereas in recessions they may be more afraid of leaving their current job as opportunities become more scarce.

Sector-specific recessions can also cause "forced" occupational mobility that may be very costly for prime-aged workers. For example, mass layoffs in a given industry can lead to lower earnings as specialized workers are obliged to learn a new occupation.

HOW DO JOB CONTRACTS AFFECT WORKERS, EMPLOYERS AND ECONOMIES?

Many European and Latin American countries have two-tier labor markets with two distinct types of contract: short-term contracts with very low firing costs and permanent contracts with very high firing costs. The policies that created flexible contracts were meant to increase the supply of jobs, making it easier for firms to hire workers. Permanent contracts were encouraged to increase job security. In some cases, however, these policies have created highly dualized markets in which some workers flit precariously between short-term

contracts while others stay in the same job for most of their career, regardless of how suitable that job is for them. The United States is at the other extreme, where employment protection is very low but employment creation is relatively easier.

This generates a dynamic market with high rates of job creation and job destruction.

Firms often complain that permanent contracts reduce productivity by discouraging firms from hiring and firing, while increased job security discourages workers from moving to jobs that are a better fit for their skills. But temporary contracts can also lower productivity because workers may not stay in the job long enough to acquire sufficient experience and occupation-specific human capital. ●

"CHANGING CAREERS MAY OFFER THE POSSIBILITY TO FIND A BETTER MATCH."

"WE MUST MOVE BEYOND THE IDEA THAT A PERMANENT CONTRACT IS A PRIVILEGE TO WHICH WORKERS SHOULD HANG ON TO."

A COSTLY EMPLOYMENT POLICY

Every government invests in employment policy. The aim is to train workers, support the most vulnerable, and protect those who are trapped in a sector undergoing rapid technological and economic change. But France spends far more heavily in this area than its international peers. The 30 years of growth that followed the Second World War (the *Trente Glorieuses*) enabled the creation of new jobs, often on permanent contracts, and the health of public finances allowed for government support. Over the past 40 years, the situation has been slowly deteriorating. Today, our labor market is still beset by a "perfect storm" of three key challenges:

- As with the rest of our social system, our public employment policy risks collapse if we fail to control public finances.
- Migrants represent both a cultural and an economic opportunity. We must welcome them as contributors to society and open the job market.
- The digital revolution will exacerbate the cost of inflexibility, as it increases the speed at which jobs are transformed. We must update complex labor laws designed for early 20th-century factory workers rather than for the new forms of labor. ●

In 2016, François Hollande staked his political future on creating more jobs, with unemployment stubbornly above 10%. Within months, his presidency was over. Writing in 'Economics for the Common Good' at the time, Jean Tirole called for urgent reform of employment policy. Following shock votes for Brexit and Donald Trump, he further worried that people's fears for their jobs were fueling populist movements. Seven years on, we asked TSE's Nobel laureate to revisit his analysis.

Unemployment has fallen dramatically since 2016, but it is still much higher in France than in northern European countries. It particularly affects 15–24-year-olds. Although there has been a strong decrease in recent years, the unemployment rate for this age group in 2022 was still 17.6%. We also need to significantly improve the employment of older people: the employment rate of 60–64-year-olds was 33% in 2020, compared with more than 60% in Denmark, Germany, and the Netherlands, and close to 70% in Sweden. Unemployment specifically penalizes those with poor education and training, and low-income urban populations. Labor market reforms, have done much to improve the employment situation. But many reforms should also target young people, through training and through a radical reform of our education system, from primary school to university, to bring it up to the level of other major nations.

DISCONTENT AT WORK

Another continuing cause for concern is the unhappiness of French workers. The strong opposition to the pension reform – even though French people retire earlier than in all other European countries – testifies to



INEQUALITIES

A world where women can bridge the "dream gap" to any job, as depicted in the recent Barbie movie, remains a candy-colored fantasy. Despite remarkable progress in many countries, workplace inequalities continue to undermine social cohesion and our economies. In this chapter, we investigate why gifted women are often paid less and absent from senior roles. From the First World War to the motherhood penalty, TSE researchers discuss the causes of such disparities and suggest ways to overcome them.

In the shadows of war



Black and white photographs of women working in weapons factories have left an indelible imprint on the national imagination. The First World War was a turning point for French society, but research by TSE's Victor Gay challenges popular ideas about the liberation of women on the assembly lines.

Women have always worked. But at the time of the First World War, even their paid work was overlooked by labor statistics: many worked inside the home, farm, or family business, often in textile manufacturing and domestic services.

430K
WOMEN WERE EMPLOYED IN THE ARMAMENT INDUSTRIES BY
1918

Women were decisive participants in the industrial war effort, with as many as 430,000 employed in the armament industries by 1918. The war caused a massive demographic shock, killing more than 1.3M French men. Often widowed by the bloodshed, and with fewer men to marry, many women were forced to find an occupation to make ends meet.

THE FOG OF WAR

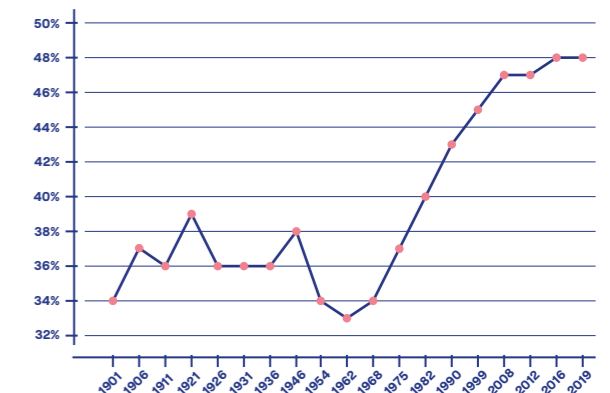
But this massive inclusion of women in the labor force was not initially as liberating as we might expect. First, it was a sign of women's impoverishment relative to their pre-



war economic status. Second, it was followed by strong antifeminist political measures. After the war, many female workers were promptly dismissed as the government took steps to guarantee veterans their pre-war jobs. Men in power called for repopulation and a reversion to patriarchal family norms. Access to contraception and abortion was restricted, as France lagged its peers in extending the vote to women.

Over generations, however, the power of working women to change social norms began to break through. Victor's research has shown that men and women whose mothers and grandmothers had worked during the First World War had more progressive views about the role of women in the labor force. Their fight for equality continues. ●

WOMEN IN THE WORKING POPULATION



Bibliography: tse-fr.eu/tse-mag

Why don't more women become economists?

Women are underrepresented in many industries and academic disciplines, but the gender gap in economics is particularly large and persistent. In the US, there are about three males for every female student majoring in economics and this ratio has not changed for more than 20 years. Why has progress stalled? How do other countries compare? In a recently published paper, TSE professor Emmanuelle Auriol and her co-authors analyzed data from around 1,400 institutions – including top universities, business schools, and central banks – to look for answers.



EMMANUELLE AURIOL
Chair of the EEA Standing Committee on Woman in Economics (2015-2018), which aims to support women by facilitating networks and information exchanges.

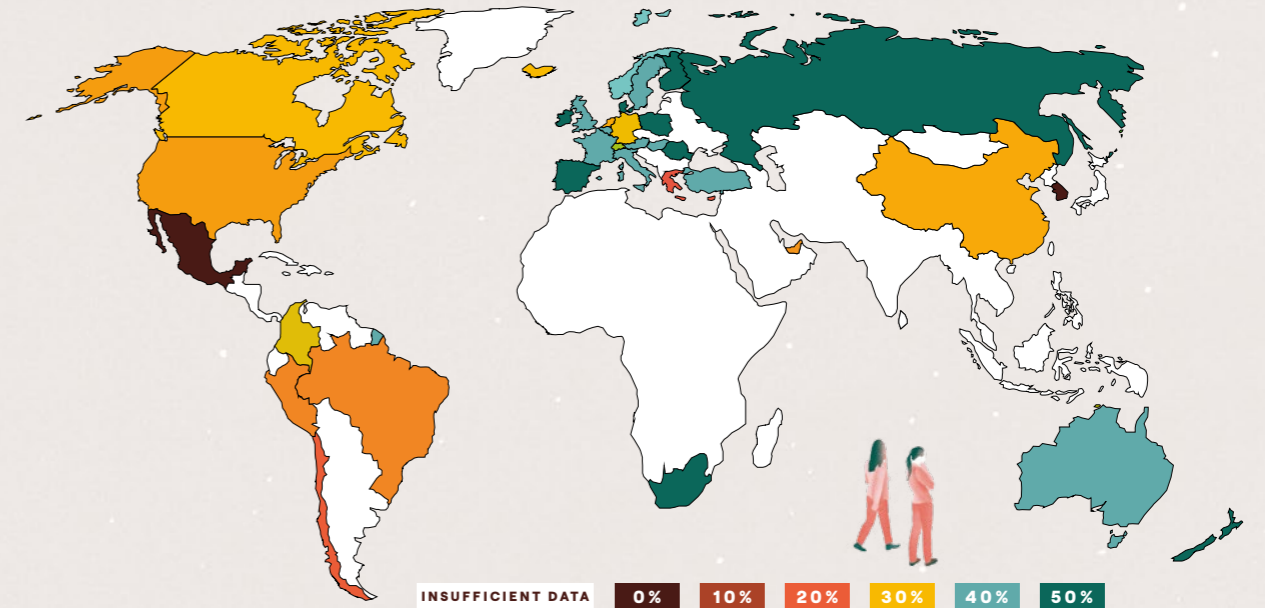
“In the early years of my career, being a woman was a big handicap.” Elinor Ostrom, the first woman to win the Nobel Prize in Economics in 2009, turned what was considered as a flaw into a strength. Today, women working in economics still have to overcome many obstacles. In the United States, between 30% and 35% of PhDs in economics were earned by women over the past decade, and yet, in 2019, only 14.5% of full professors were women.

This “leaky pipeline” phenomenon, highlighted in Emmanuelle Auriol’s work with Guido Friebel, Alisa Weinberger and Sascha Wilhelm, is just one of the illustrations of the gender gap in economics. Researchers have also found that women are held against higher editorial standards, evaluated more critically, and given less credit for their publications. Many barriers prevent or delay women’s ascent to senior positions, and if they make it to the top, in the US they are paid just 75% of men’s salaries (according to 2010 data).

AS ECONOMICS PROFESSORS, WOMEN ARE HEAVILY OUTNUMBERED BY MEN

76% ♂
24% ♀

WOMEN IN ALL ACADEMIC POSITIONS IN ECONOMICS



Source: women-economics.com, 2020

SEXISM

A hostile environment can discourage women from applying for a job in economics. Alice Wu’s recent study of the Economics Job Market Rumors online forum reveals evidence of strong stereotypes and sexism, with many women highlighting inappropriate behavior during job interviews, seminars or meetings. Another study shows they are interrupted much more frequently than men in seminars and often asked “paternalistic” questions. And yet, the presence of women in economics is necessary because they choose different research topics than men, working for instance more on health or education than on macroeconomics. The weak representation of women in the most prestigious and powerful positions implies less focus on these topics and less publicity around the results.

WORSE IN THE UNITED STATES

According to Emmanuelle’s data, the share of women in economics departments is around 35% in Australia and New Zealand, around 32% in Europe, and only 26% in North America. Top institutions in the US hold their female faculty to higher standards not only at senior level, but already at entry level. This might be due to differences in culture, hiring practices or the academic job market. The authors suggest we need to think more carefully about the matching process between job-market candidates and employers, since women might refrain from applying for the best academic positions because they lack confidence, or encouragement and mentoring from senior economists.

EMMANUELLE AURIOL'S EXPERIENCE

WHY DID YOU BECOME AN ECONOMIST?

When I began my career, in the 1990s, the feminization of economics had just started. There were very few, if any, women professors. It was quite difficult to envision a career in this field with no women to look up to. But I chose this path because I found people who believed in me, beyond my gender, like Jean-Jacques Laffont. He thought that things were bound to change now that women were getting the same level of education as men.

AND DID THINGS CHANGE?

Today, many intelligent, skilled and resourceful women graduate from college, and yet very few manage to climb the ladder. In economics, the glass ceiling is statistically formidable. With several researchers, I decided to work on the topic of women in economics to show how complex discrimination can be.

"I FOUND PEOPLE WHO BELIEVED IN ME BEYOND MY GENDER."

WHY IS IT IMPORTANT TO DOCUMENT THIS DISCRIMINATION?

The only way to change things is to document them. Once you give people facts, they must face them. Using an unbiased scientific approach that delivers facts and

evidence is the only way to be heard on such an important issue.

Discrimination can be tricky to prove because it is self-fulfilling. Does it exist because of biological differences? Because women have children while working? This does affect their career because they put it on hold momentarily. However, I strongly believe that it makes women more efficient; they can multitask more easily than men.

HOW SHOULD INSTITUTIONS RESPOND?

It can be quite complicated to implement public policies on this subject, even with good intentions, they can have a negative impact. Institutions must be aware of these issues and understand how biased they can be, particularly in terms of promotion. They have to establish objective and quantitative criteria to evaluate both men and women.

It is unacceptable not to have more women in senior positions, especially when 60% of all graduates at the university are women. It's also very important to have more diversity in economics – regarding gender, race or any other minority – because it allows a wider range of research topics to be treated.

WHAT ADVICE DO YOU HAVE FOR YOUNG ECONOMISTS ABOUT THE GENDER GAP?

Women are often interrupted in seminars.

Be aware of the current context: it helps to know what to expect and also work on your own bias. Women should make sure they know how to deal with paternalistic interruptions, while men should be careful not to reproduce prejudiced patterns.

For women, it might be better not to work in teams with senior men.

If you do, make sure to get credit for your work.

Get recognition: You have to say, "my work", "I discovered", etc.

Studies show that if you don't pay attention, you might not get credit.

Do not accept inappropriate treatment.

At the same time, avoid being an "accomplice" of discrimination by treating other women badly.

Does networking keep men ahead?

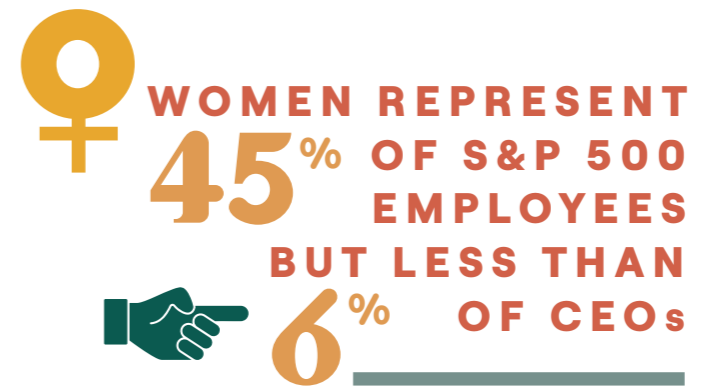


MARIE LALANNE

'It's not what you know, it's who you know.' This popular saying suggests that well-connected job candidates will outcompete more talented and qualified rivals. Since her doctoral thesis at TSE, Marie Lalanne (Joint Research Center, European Commission) has been studying how favoritism operates in the workplace and its impact on diversity. Could differences in personal and professional networks explain why are there so few women in powerful positions?

Despite decades of progress in women's participation in the labor force, women are still largely absent from senior corporate positions. Recruitment to top positions is often an informal process, involving both professional headhunters and word-of-mouth recommendations, so good contacts are likely to be crucial for climbing the corporate ladder.

However, it has proved extremely difficult to provide hard evidence about whether women's careers are held back by less effective networks. This is because 'who you know' is likely to be highly correlated with 'what you know'. Talented, successful individuals are likely to build more extensive networks, even if their networks in no way contribute to that success.



searching and career advancement. In this context, large networks of loose connections may provide more useful information, outweighing the cooperative benefits of a small, fiercely loyal sisterhood.

There is also evidence that homophily – a preference for interacting with similar others – may exacerbate the gender gap. If people prefer to recommend their

own gender, male-dominated positions will keep being filled by males. Other explanations have focused on differences in behavior within networks. A handful of studies suggest that males reward their contacts more than females, have poorer information about

women's skills, and receive more benefits from men. Similarly, several subjective studies based on surveys of top corporate individuals reveal that women appear to lack the relevant informal connections to access top positions and reap lower career benefits from their social networks. →

JOBS FOR THE BOYS

There is suggestive evidence that subtle differences in networking strategies can make the talents of women less visible. For instance, while women rely more on small, tightly knit networks, the male tendency to build larger groups with weaker ties may be more suited to job

»» GET CONNECTED

In a recent paper ('The old boy network', 2022), Paul Seabright and I provide a more empirical investigation. We use headhunting data on the wages and former colleagues of nearly 27,000 senior executives from more than 5,000 North American and European firms. We find that the size of an individual's network has a large positive correlation with their earnings. Much of this is due to unobserved factors like talent or dynamism, but when we control for such factors there's evidence that a significant positive causal effect of networks on earnings remains. And that effect is larger for men than for women. This result appears to be due to two factors. First, both men and women are helped more by own-gender connections than other-gender connections, and men have more of

these than women. Second, firms that employ more women in senior positions reward networks less than other firms. The recruitment methods of these 'female-friendly' firms, which have larger boards and more qualified executives, may rely more on objective criteria than on contacts. However, the scarcity of women in CEO positions suggests this phenomenon is not widespread.

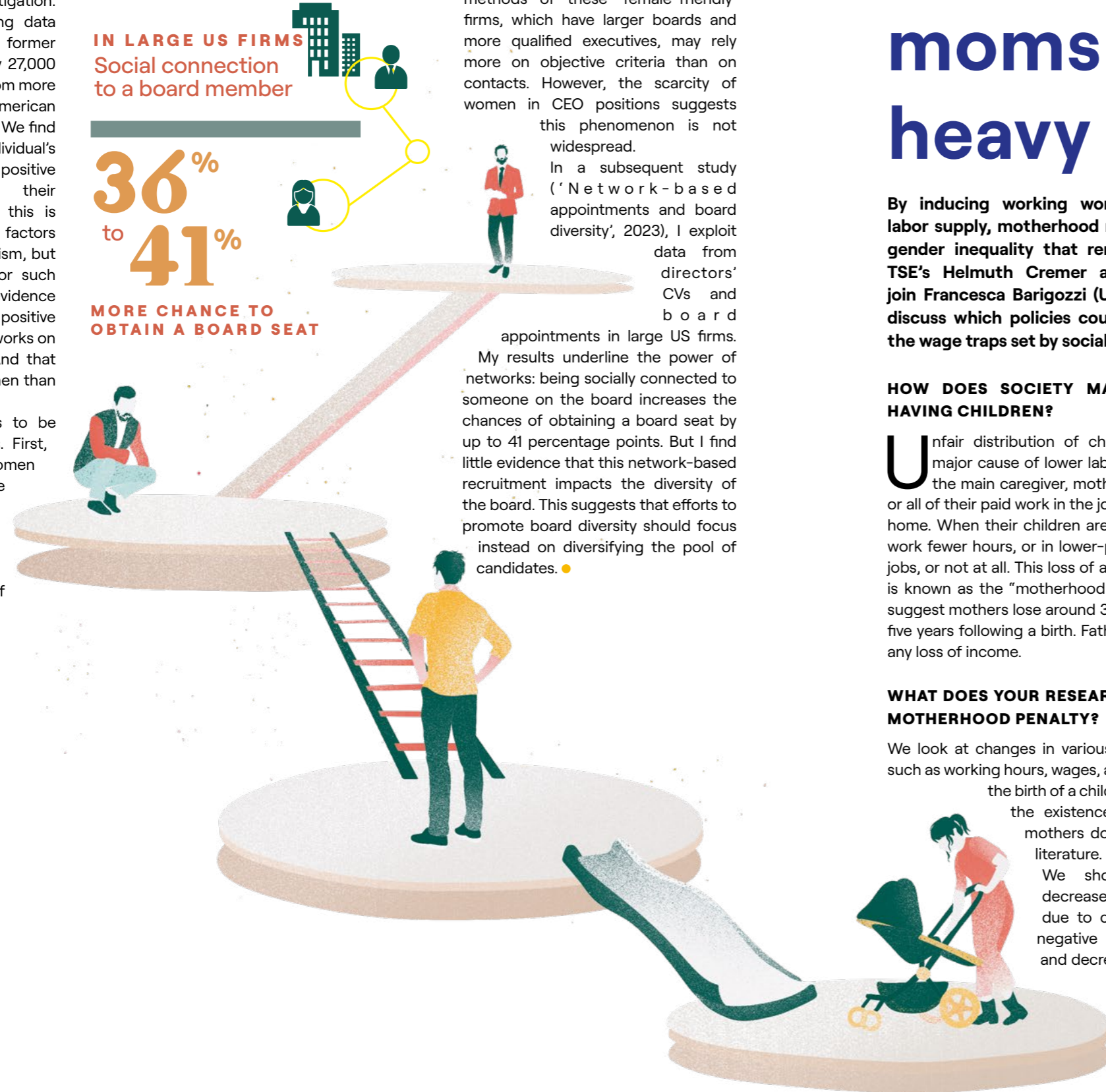
IN LARGE US FIRMS
Social connection
to a board member

36%
to
41%

**MORE CHANCE TO
OBTAIN A BOARD SEAT**

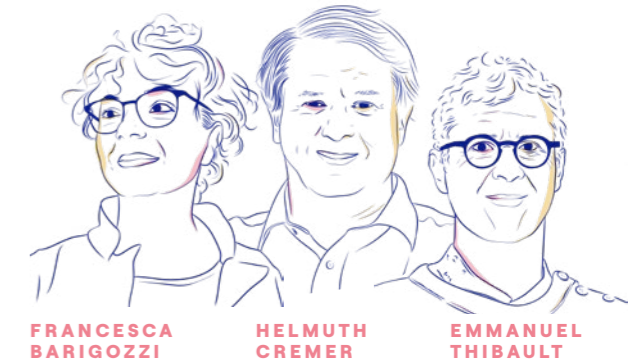
In a subsequent study ('Network-based appointments and board diversity', 2023), I exploit data from directors' CVs and board appointments in large US firms.

My results underline the power of networks: being socially connected to someone on the board increases the chances of obtaining a board seat by up to 41 percentage points. But I find little evidence that this network-based recruitment impacts the diversity of the board. This suggests that efforts to promote board diversity should focus instead on diversifying the pool of candidates. ●



Why do working moms pay a heavy price?

By inducing working women to decrease their labor supply, motherhood may explain most of the gender inequality that remains in rich countries. TSE's Helmuth Cremer and Emmanuel Thibault join Francesca Barigozzi (University of Bologna) to discuss which policies could help mothers escape the wage traps set by social expectations.



HOW DOES SOCIETY MAKE WOMEN PAY FOR HAVING CHILDREN?

Unfair distribution of childcare responsibilities is a major cause of lower labor earnings for mothers. As the main caregiver, mothers must often give up part or all of their paid work in the job market for unpaid work at home. When their children are young, mothers choose to work fewer hours, or in lower-paid but more child-friendly jobs, or not at all. This loss of average earnings that results is known as the "motherhood penalty". In France, studies suggest mothers lose around 30% of their income over the five years following a birth. Fathers do not appear to suffer any loss of income.

WHAT DOES YOUR RESEARCH REVEAL ABOUT THE MOTHERHOOD PENALTY?

We look at changes in various labor-market outcomes – such as working hours, wages, and labor income – following the birth of a child. Our model helps to explain the existence of the child penalty for mothers documented by the empirical literature.

We show that the temporary decrease in mothers' labor supply due to childbearing may activate a negative spiral of decreasing effort and decreasing wages called a "wage trap". This can create permanent poverty and a permanent gap in labor earnings between genders.

WHICH FAMILY POLICIES APPEAR TO BE THE BEST SOLUTIONS?

When human capital increases with work experience and on-the-job training, temporary subsidies to mothers' wages and the provision of childcare are cost-effective. Subsidies such as income tax credits help mothers to exit the wage trap and speed up the recovery of pre-motherhood earnings. By encouraging mothers' labor supply, subsidies can compensate for human capital losses and spark a positive spiral of increasing labor supply and wages. Other policies like paternity leave, formal childcare subsidies, and in-kind provision of formal childcare can be useful in reducing the cost of going back to work, but they only indirectly affect mothers' labor supply decisions. Policies that may backfire are (long) maternity leave and cash transfers. These measures may temporarily make up for lost earnings but they also reduce the incentives to invest effort in going back to work, potentially reinforcing the negative spiral of the motherhood wage trap.

WILL THE GENDER GAP EVER BE CLOSED?

The motherhood penalty is responsible for a much larger portion of the gender gap in earnings than it was three decades ago. While family policies can help, eradicating the gender gap will require a shift in societal norms, with both parents sharing childcare, housework, and other family responsibilities equally. ●

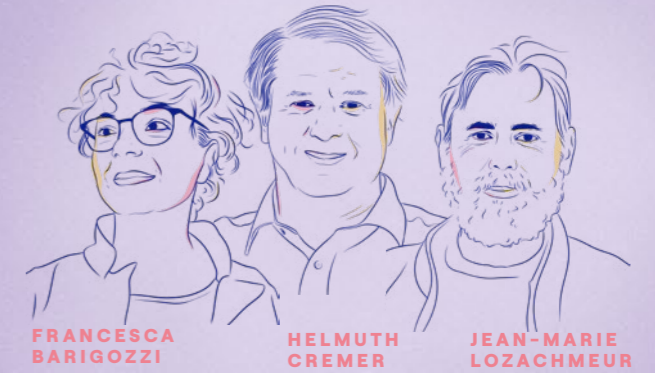
Dive into TSE's research and find out more about the paper 'The Motherhood Wage and Income Traps', 2023 at tse-fr.eu/tse-mag.

PENSIONS

Rapidly aging populations endanger the survival of pension systems around the world. This year, France enacted sweeping reforms that ignited fierce opposition over issues such as retirement age, contributions and benefits. As the debate rages on over the need for fiscal prudence and redefinition of the nation's social contract, our researchers outline the key measures and suggest that building a fair system will be a difficult balancing act.



The myth of gender-neutrality



Gender gaps in the job market can get even wider when we enter retirement. TSE researchers Helmuth Cremer and Jean-Marie Lozachmeur with their co-author Francesca Barigozzi, explain why pensions must not be blind to inequalities that hurt both men and women.

SHOULD PENSIONS REDISTRIBUTE WEALTH BETWEEN MEN AND WOMEN?

In most pension systems, particularly in France, benefits are based on contributions which are in turn based on wages. Women live longer than men, on average, but as they tend to have lower wages and shorter careers due to childrearing, they receive lower pensions.

These longevity and wage gaps are decreasing, but as long as they continue to exist, some redistribution between men and women is justified. This requires gender-specific pension benefit rules. However, European law forbids pension benefits from being determined by gender. Our research highlights the negative consequences of this gender neutrality rule for both men and women. Our results show that gender neutrality is unfair. Specifically, it is extremely advantageous to single men (who should contribute more than they do), to the detriment of single women and couples (who should contribute less than they do). Male spouses are also worse off, given that couples typically pool their resources while women live longer.

SHOULD UNPAID WORK BE INCLUDED IN THE CALCULATION OF PENSIONS?

Childcare and housework are not explicitly accounted for in our model. While giving women credit for this unpaid

work would be fair, it might incentivize them to take more leave, which is bad for their careers. Designing explicit compensation for women's unpaid domestic work would be equivalent to asserting that housework and childcare are women's responsibilities. Instead, all family duties should be equally shared between partners.

ARE WOMEN DESTINED TO BE TRAPPED BY LOWER WAGES AND LOWER PENSIONS?

Some symbolic policies like gender neutrality are ineffective or even harmful as long as fundamental differences in gender roles persist. The pension system is just one of the possible tools for redistribution: other instruments, like providing childcare, may be more effective. But social norms, the perception of women's role in the family, and society's attitude towards working mothers are deeply enshrined in traditions and cannot be simply changed by public policy. ●

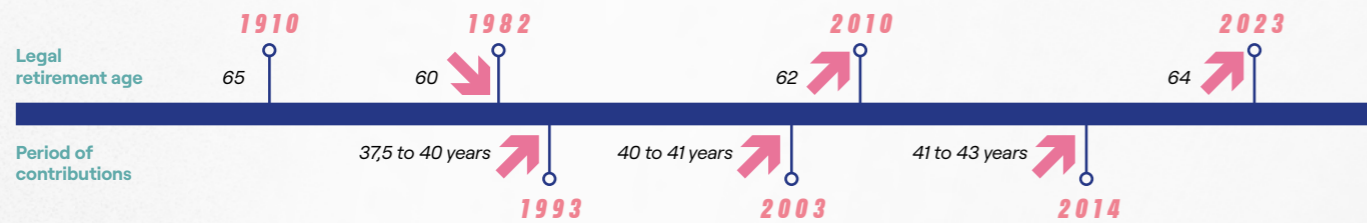


A delicate balance

In early 2023, the French pension reform was the talk of the town, with thousands taking to the streets in protest. To better inform the public debate, Toulouse Capitole researchers hosted a cross-disciplinary forum on April 14. TSE managing director Christian Gollier, professors Mathieu Carpentier and Frédéric Guiomard from Toulouse's Faculty of Law, and research officer Zoé Jacquemin were invited to take part.

Students at this event were encouraged to consider a wide range of issues, such as the three levers for financing the pension system (retirement age, contributions, pension levels) and the balance between work and leisure. Here, we look at how the French pension system works, how it has evolved in recent years, the reasons behind the government's decision to carry out this reform, and the impact of the new legislation.

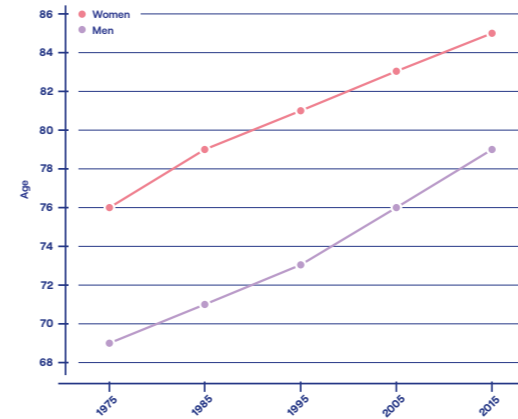
HISTORY OF THE FRENCH PENSION SYSTEM



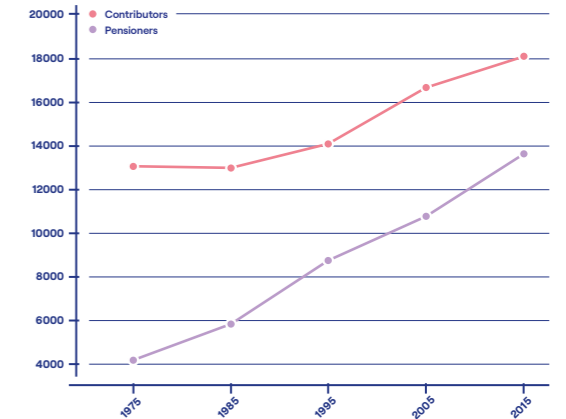
SOLIDARITY BETWEEN GENERATIONS

Unlike countries such as the US and the UK, France has opted for a pay-as-you-go system: contributions are deducted from salaries, then redistributed as pensions to retirees. In recent years, the balance of the system has become threatened by two major challenges: longer life expectancy and an aging population.

EVOLUTION OF LIFE EXPECTANCY IN FRANCE



NUMBER OF CONTRIBUTORS PER PENSIONERS



Sources : Insee

WHAT ARE THE MAIN MEASURES OF THE APRIL 2023 REFORM?

Because of the growing imbalance of the French pension system, Elisabeth Borne's government has voted to reform the system, despite several months of mobilization and opposition, particularly among young people. Here are the main points.



- Extension of the legal retirement age from **62** to **64** in 2030
- Consideration of arduous work to fund retraining
- Minimum pension for complete careers to rise to **85%** of minimum wage
- Permission for long-career workers to retire before **64**
- New target to reduce the pension gender gap

- Extension of contributions period from **42** to **43** years to start in 2027 rather than 2035

- New insurance for caregivers

- New premium for mothers

- Senior index and new contracts to encourage over 50s

- Assessment of reform package in **2027**



ANALYSIS BY FREDERIC GUIOMARD

By raising the retirement age, this reform increases the burden on the least qualified, most vulnerable workers, explains Frédéric Guiomard, professor of social law. Longer contribution periods mean later retirement and/or lower pensions for those with incomplete careers.

"The prospect of retirement seems very abstract when you're 20," he adds. "It's impossible to predict what the situation will be like in 40 years' time, but we do know that a pension system can only function based on solidarity between generations. Only investment in the future, education and the environment can ensure the survival of sustainable pension systems. Our societies have no choice but to constantly reinvent the bonds of solidarity."

FUTURE OF WORK



The meteoric rise of artificial intelligence has already impacted industries and workflows, creating unprecedented opportunities and challenges. While AI promises enhanced productivity, efficiency, and innovation, the future of work is also shrouded in anxieties over job displacement and shifting labor dynamics. In this section, our researchers explore how humans and machines can work together.

Will AI take my job?



FRANÇOIS POINAS

New technologies can cause huge disruption to jobs and livelihoods. Fearful textile workers in 19th-century England and France – the Luddites and Canuts – responded to industrial innovation with violent protests. Should today’s workers tremble at the rise of artificial intelligence (AI)? TSE’s François Poinas argues that AI is likely to have contradictory effects on employment, inequality and education.

WILL THERE STILL BE JOBS IN THE FUTURE?

Technological revolutions in the past have always led to job creation and destruction, but never to the end of labor. Given the nature of the current development of AI (around machine learning and associated methods), there is no particular reason to think that this time will be different. AI is more likely to automate specific tasks within a job rather than entire occupations. However, developments in machine learning such as deep learning and neural networks will have important consequences for many professions.

For example, in healthcare, machine learning models can be trained to predict the likelihood of a patient succumbing to a particular disease based on their medical history and lifestyle. In finance, algorithms can help to predict stock prices. Such technologies can replace workers in some

tasks but, by improving productivity, they can add value that increases demand for labor. AI can also create new tasks where labor has a comparative advantage.

The impact on workers depends on whether the tasks they are performing are a complement or a substitute to AI. Researchers have been classifying jobs according to the likelihood that they can be performed by AI, either using expert opinion (Brynjofson, Mitchell, Rock, 2018), patents (Webb, 2021), or the advancement of AI capabilities (Felten, Raj, Seamans, 2018). This burgeoning literature has not reached a consensus yet about the effect of AI on jobs. The former find no occupation in which all tasks are likely to be replaced by AI, and that both high- and low-skill occupations are at risk, whereas Webb finds that high-skill occupations will be the most affected. →



>>> WILL REWARDING CAREERS BE REPLACED BY PRECARIOUS, SHORT-TERM WORK AND POOR CONDITIONS?

The jobs of the future will be different, with different tasks. Many repetitive and predictable tasks are easy to automate; but tasks that require fine manual dexterity, complex decision-making, creativity, social intelligence, and emotional engagement may be less susceptible to replacement by machines.

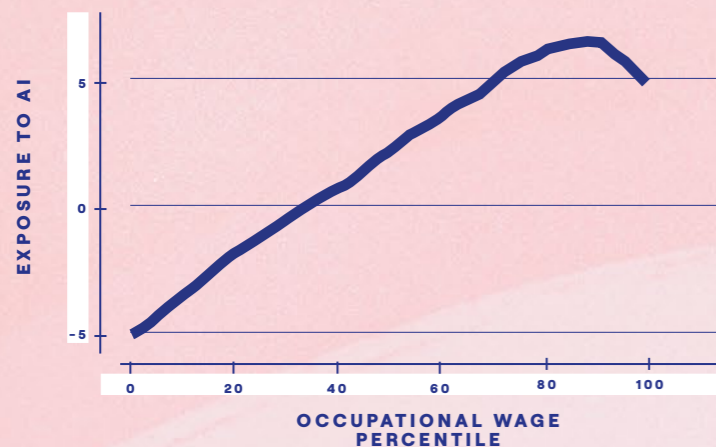
AI can replace workers, but it is also a tool that can augment human capabilities and enable workers to focus on higher-value tasks. This can lead to job transformation rather than job loss. For example, AI can be very useful for interpreting X-ray images, allowing radiologists more time to focus on other tasks for which AI is less suitable, such as choosing images, interpreting the machine's results, and combining qualitative information.

The extent to which workers will suffer or benefit from AI depends on whether there is more creation or destruction of jobs, and on the characteristics of the jobs affected (especially in terms of skills). If employment becomes scarce, workers will have less bargaining power to demand good working conditions and wages. These effects will not be uniform across workers if some groups are more affected than others. For instance, if AI replaces more high-skill jobs, driving up competition for lower-skill jobs, this may force formerly well-paid workers to accept worse conditions, part-time work, and short-term contracts.



HIGH-PAYING JOBS ARE MORE LIKELY TO BE HEAVILY IMPACTED BY AI

Source: Webb (2021)



WILL AI INCREASE INEQUALITY?

The impact on inequality also depends on how differently skilled groups of workers are affected. In the 80s and 90s, innovations in IT allowed the automation of routine cognitive tasks, so the net effect was a decline in employment in middle-skill groups, and an increase in employment in other groups, contributing to increased wage inequality. If high-skill workers are pushed out of work but other groups are not affected, AI technologies may reduce the existing wage gap.

HOW CAN STUDENTS PREPARE FOR AN AI-DOMINATED JOB MARKET?

There will be job opportunities in the AI industry – to develop, train, maintain AI systems – but also in sectors that will use AI as a tool. Workers need to be prepared to work with these AI tools, especially in terms of skill acquisition. Developers also have the possibility to create new tasks and develop new AI tools that do not just replace humans in their work, but augment employment.

Training workers to develop AI products will require skills in optimization, programming, and big data. Training will also need to be adapted for other jobs that are affected by AI as certain tasks are replaced. For example, if buses become increasingly automated, the training of their human operators should focus less on driving and more on other dimensions such as passenger relationships and problem solving. ●



Hello? This is AI calling...

Don't have time to write an email? Don't worry, AI is here! You might already be using recommended email responses. Why not? It saves time, as someone has thought how to reply. Someone? Or something... Artificial intelligence. Psychologist Zoe Purcell tells us more about our communicating via AI.



HOW CAN I HELP YOU?

LIST THE SKILLS I NEED TO BECOME A GREAT ECONOMIST?

The use of AI-mediated communication is booming. From email prompts to Alexa, Grammarly and ChatGPT, many of us rely on a computational agent to modify, augment or generate messages. In communication focused organizations, like call centers, AI is already being harnessed, for example, to make employees sound

happier. Other organizations are poised to benefit from AI communication since Covid accelerated the shift to online and remote working, integrating new technology.

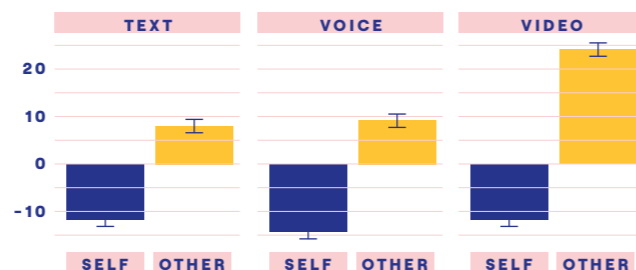
Like previous technological disruptions, the introduction of AI communication to the workplace comes with pros and cons. AI tools can help people overcome disadvantages, for instance improving your ability to write in another language. However, attitudes towards AI in the workplace differ depending on gender, race, and education. In that sense, AI may exacerbate existing inequalities.

AUTHENTICITY

The introduction of AI to the workplace will come with many trade-offs we are only beginning to understand. My research at IAST (interdisciplinary research department

housed at TSE) suggests that people using AI powered text tools, like ChatGPT, can produce the same quality of work as people who don't, but they save time. When AI use is detected (or suspected), however, this efficiency gain is offset by a reduction in interpersonal trust and authenticity. For instance, job applicants can now use AI to edit or create cover letters and CVs. Hiring committees are already using AI to evaluate applications that have been AI-generated. Depending on the purpose and context of the communication, workers and workplaces will have to carefully consider whether it is appropriate for them. At the same time, we need to start asking what authenticity really means. Is a message authentic because it is 'unedited'? As this technology develops, we expect to see shifts in what is seen as acceptable and normal in the workplace. Therefore, while the use of these tools may reduce trust at the moment - it may not carry so much stigma in the future. With AI communication tools now in the hands of everyday workers, it may be time to reframe authenticity as capturing the author's truest intention. With this approach, AI augmentation may be seen as a tool for greater authenticity, clearer communication, and deeper trust rather than deception, miserliness, or mistrust. ●

PEOPLE ARE 4X MORE LIKELY TO EXPECT OTHERS TO USE AI COMMUNICATION TECH IRRESPONSIBLY THAN THEY WOULD THEMSELVES



My coworker, the robot



The increasing integration of AI into the workplace means that machines will at some point become colleagues to whom we delegate tasks, cooperate with, and report to. Researcher at TSE, Jean-François Bonnefon warns that these relations will present psychological and ethical challenges, as we start to map our way into the workplaces of the future.

Many workers are already delegating tasks to machines. This can be a positive experience: AI can handle repetitive or time-consuming work, leading to productivity gains and giving humans more time to focus on tasks that require their special touch. The public release of ChatGPT made this experience available to everyone, but also illustrated our uncertainty about the ethics of relying on machines we do not understand, to perform tasks we are not sure they can handle. In the absence of transparency about which exact task was delegated, the instructions given, and the extent of AI output in the task's outcome, mistakes may be made without a clear understanding of who is responsible. AI may also perform tasks using questionable means, without proper supervision.



TRUST AND COOPERATION

Cooperating with AI in the workplace can lead to unconventional team dynamics, as employees must learn to trust that AI systems will help rather than compete with them; and learn to assist AI systems with their goals. Trust and cooperation between humans rely on social norms, appropriate incentives, and evolved emotions, but all these building blocks are missing when people cooperate with machines. First, there are no consensual norms about whether it is socially desirable to trust and help machines. Second, machines do not care about incentives the way humans do; for example, people cannot assume machines are motivated to cooperate by financial rewards. Third,

we do not empathize with machines as we do with other humans, which removes a powerful motivation to help them or care about their goals.

Having AI as a manager is a new and potentially disturbing idea for many. AI may be better than humans at making unbiased decisions and optimizing team performance. But employees may struggle with the idea of reporting to a non-human entity, and develop feelings of alienation or disconnection.

AI managers may themselves struggle with emotional support, empathy, and the navigation of complex interpersonal conflicts. We have little data so far that could help us predict the future of AI management, and these data can be contradictory. For example, employees without experience of AI management are typically averse to the idea, but this may be due to distorted media coverage or fictional representations.

In contrast, employees with experience of AI management are more positive about it, but their responses may be biased by pressure to speak favorably of their company, or by the fact that companies that use AI management are the ones in which AI management is the least problematic. ●

The world of work



Setting out

WHAT ARE WE WORKING FOR?

Our success as individuals and societies depends on a healthy mix of competition and cooperation.

TRAINING

GET ON THE RIGHT TRACK

We should prepare students better before high school instead of using grade repetition.

56% of elite school students have a mother with a higher education degree.

NAVIGATING

SHOULD I STAY OR SHOULD I GO?

Finding a job that fits is often a process of trial and error.

FRANCE'S TROUBLED LABOR MARKET

We must move beyond the idea that a permanent contract is a privilege to which workers should hang on to.

PENSIONS

THE MYTH OF GENDER-NEUTRALITY

Women live longer than men, but receive lower pensions as they tend to have lower wages and shorter careers.

A DELICATE BALANCE

A sustainable pension system can only be achieved by investing in our future, education and the environment.



INEQUALITIES

IN THE SHADOWS OF WAR

People whose grandmothers worked during the First World War have more progressive views about women in the labor force today.

WHY DON'T MORE WOMEN BECOME ECONOMISTS?

In the US, between 30% and 35% of PhDs in economics are earned by women, and yet, in 2019, only 14.5% of professors were women.

DOES NETWORKING KEEP MEN AHEAD?

Subtle differences in networking strategies can make the talents of women less visible.

WHY DO WORKING MOMS PAY A HEAVY PRICE?

French mothers lose around 30% of their income over the five years following a birth.

FUTURE OF WORK

WILL AI TAKE MY JOB?

AI can replace workers, but it can also augment human capabilities and enable workers to focus on new, higher-value tasks.

HELLO? THIS IS AI CALLING...

AI-mediated communication can increase deception and threaten our trust in others' authenticity.

MY COWORKER, THE ROBOT

Employees must learn to trust that AI systems will help rather than compete with them.





Toulouse School of Economics

Economics for the
Common Good



STAY TUNED FOR MORE FUN,
AND CHECK OUT OUR PLAYLIST
FOR THE WORLD OF WORK.