

IN SEARCH OF LOST PURCHASING POWER

When Public Policies Harm Purchasing Power

Cécile Philippe, Vincent Bénard & Nicolas Marques





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1. INTRODUCTION

In these times of instability, with a global pandemic and the return of war to the edges of Europe, concerns about purchasing power are particularly important.

While it was known that wage growth had become modest in developed countries, this effect was until recently offset by access to relatively cheap foreign products. Both the pandemic and the Ukrainian conflict continue to cause a reorganization of commodity flows, particularly energy, and a rise in the price of a number of products. Concerns about purchasing power and inflation have become more prominent.

In keeping with the tradition of the Institut économique Molinari, we have sought to make an indepth analysis by integrating various structural factors that explain, at least in part, the structural tensions surrounding purchasing power.

Every year since 2010, we have published a European ranking of countries according to the real social and fiscal pressure on the average employee. The taxes measured include employer and employee contributions to mandatory public and private law schemes (mutual insurance, pension funds, etc.), income tax and VAT¹. In France, the tax burden on the average employee is 54% (Figure 1). The average employee is particularly well paid with 54,600 euros before contributions and taxes, but his work is so taxed that he is left with only 25,000 euros net.

Cotisations sociales patronales		Cotisations sociales salariales		es 📕 I	Impôt sur le revenu		TVA estimée	Disponible net de charges et impôts		
Allemagne	17%	1	7%		14%			49	%	
Autriche	23%		14%	6	14	1%			46%	
Belgique	19%		11%	21%					47%	
Bulgarie	16%	1	2%	7%		61%				
Chypre	13%	10%		71%						
Croatie	14%	17%	i.	79	6	5%	56%			
Danemark	35%				5%	59)%			
Espagne	23%		4,9%	6 11%			57%			
Estonie	25%			9%		59	1%			
Finlande	18%		8%	14%			55%			
France	30%			17%	6				46%	
Grèce	18%		12%	10%	5		55%			
Hongrie	12%	16%		13%		5%	6 54%			
Irlande	10%	18%		59	% 63	%				
Italie	23%		7%	15%			4% 5	1%		
Lettonie	19%		8%	14%		4%	6 55%			
Lituanie	19%		15%			59	%			
Luxembourg	13%	11%	14	%		5	8%			
Malte	9%	9%	9%	68	B%					
Pays-Bas	19%		10%	14%			53%	6		
Pologne	17%		18%				56%			
Portugal	19%		9%	12%			55%			
Roumanie	34%				6%	ŝ.	54%			
Royaume-Uni	11%	9%	12%		63	%				
Slovaquie	26%			10%	7%		53%	6		
Slovénie	14%	19%			6%		57%			
Suède	24%		19	%			53	%		
Tchéquie	25%		8	3%	5%		57%			
Moyenne pays de l'UE	17%		10%	14%			55%			

Figure 1 : Shift from employer cost to net salary in 2022

Source: Institut économique Molinari, calculations made with EY for average single employees without children and the tax system applicable in 2022.



In fact, a whole series of regulations increase the burden on employees beyond what this analysis shows, taking into account social contributions, income tax and VAT. Specific taxes or regulations have an impact - direct or indirect - on purchasing power. We thought it would be interesting to measure the extent of this impact in order to better understand the current tensions.

Specific regulations increase the price of housing, which is now the number one item of household expenditure (chapter 1). Special taxes increase the price of certain goods, notably fuel and tobacco (chapter 3). At the same time, a particularly high tax burden on economic activities increases the cost of labour and undermines wealth creation and wage dynamism (chapter 3), while the lack of diversification of pensions increases the cost of financing pensions, which puts a strain on the takehome pay of both working people and pensioners (chapter 4).

The structural reforms proposed in this work would make it possible to respond, at least in part, to the legitimate concerns of the French about their purchasing power by freeing it up without harming the community as a whole.

2. THE EXCESSIVE COST OF HOUSING HURTS PURCHASING POWER

The finding:

French households are victims of an inflationary spiral fueled by land prices.

The challenge:

Relax land law to improve purchasing power.

Compared to the EU, an annual additional cost of 1,100 euros for an average household

Housing prices are the cause of impoverishment of the population. The share of housing in the household budget rose on average from 11% of household final consumption expenditure in 1959 to 28% in 2021², with this increase weighing more on the effort rate of low-income households (Table 1).

Table 1: Household effort rate France in housing (% of income)

	2002	2017	Evolution %
First quartile of standard of living	27,3	32,0	17%
Of which private sector tenants	38,3	45,2	18%
Second quartile	21,8	23,7	9%
Of which private sector tenants	29	32,2	11%
Third quartile	19,4	21,2	9%
Of which private sector tenants	26,1	26,6	2%
Fourth quartile	14,1	14,4	2%
Of which private sector tenants	19,3	20,3	5%
Together	18,1	19,7	9%

Source: ratio between the sum of expenditure related to the main dwelling and household final consumption expenditure according to INSEE, Household income and wealth, INSEE References, 2016 and 2021 editions. These effort rates are lower than those indicated above because they are calculated by including in the denominator the individual consumption expenditure of governments or non-profit institutions serving households.

The reports of the Abbé Pierre Foundation³ indicate, each year, a deterioration in the situation of the poorest households in relation to housing, the number of homeless people having been multiplied by 3 since 2006, and the number of households in dilapidated housing by 2.

The economic and social consequences of higher housing prices on society do not stop there. A 2013 note from the Council of Economic Analysis points out that "rising prices lead to economic inefficiencies: they drive some workers away from employment areas, so that commuting becomes longer and some job vacancies remain unfilled." ⁴

This same work also highlights that the increase in housing prices is a factor in widening wealth inequalities, especially between generations: "the rise in (housing) prices is anti-redistributive (...). It is a transfer from the younger generations to the older ones, who are already owners, and low-income young households are very penalized in home ownership."

While the trend increase in housing costs is a global phenomenon, it weighs more heavily on French households (Figure 1). European comparisons show that housing costs 2.6% more of France income than the EU average (Figure 2), i.e. an additional cost of 1,100 euros per year per household.⁵



The explosion of housing prices relative to household incomes is a major economic and social problem. By recognizing the fundamental cause of the phenomenon, it would be possible to restore purchasing power to households.



Figure 2: Housing expenditure in France, Germany and the EU (% of household consumption expenditure)

Source: Eurostat, Household consumption expenditure by purpose of consumption [TEC00134__custom_3905594], item Housing, water, electricity, gas and other fuels.⁶



Figure 3: Housing expenditure (% of household income)

Source: Eurostat, Household consumption expenditure by purpose of consumption [TEC00134__custom_3905594], item Housing, water, electricity, gas and other fuels.⁷

The explosion in demand for housing is not enough to explain the explosion in prices

In 1997, the median price of housing in France, according to INSEE, was 77,100 euros, or 105,900 euros in 2019. However, the median price observed in 2019, before the pandemic, was 209,000 euros, almost doubling in current euros. According to official statistics from the Ministry of Housing⁸ (Figure 4), since the turn of the century, prices have risen on average 86% faster than household



income, and even 156% faster in Paris. Apart from large cities, this increase relates to the period 1997-2008.





Sources: IGEDD according to INSEE, notaries database and seasonally adjusted Notary-INSEE indices.

Many analysts note that 1997 marked the beginning of a dramatic decline in mortgage interest rates around the world. This fall in interest rates has made demand solvent and would be enough to explain the rise in house prices observed in many countries. This explanation nevertheless seems simplistic because a demand shock is absorbed in the medium term, barring physical and regulatory constraints, by an increase in supply and many data indicate that this shock has not led to price increases everywhere.

In the case of France for example (Figure 5), despite considerable rate variations since 1965, the link between falling interest rates and exploding house prices only became clear between 1997 and 2007. The previous period was marked by relative price stability despite equally marked rate variations.

The phenomenon is also true in the United States⁹, where only the period 2000-2006 indicates a relationship between lower rates and higher prices. The period 1983-1990 shows, despite a very sharp fall in rates, a fall in prices in relation to GDP (Figure 6).

In the case of the State of Texas, whose population increase was the strongest in the US (+78% between 1985 and 2020), the very strong demand for housing associated with the fall in interest rates observed in the rest of the world is accompanied, conversely, by a decline in housing prices



relative to the wealth produced almost continuously between 1987 and 2013 (Figure 7). The bubble observed on the US index between 2000 and 2006 does not even appear on the Texas price-setting curve.

In conclusion, while interest rates do play a role in the formation of house prices, they cannot be the only factor.



Figure 5: Household Income Adjusted Housing Price Index vs. Interest Rate

Source: Vincent Bénard calculations based on INSEE and Banque de France aggregated by the Ministry of Ecology and Sustainable Development, source: <u>https://www.data.gouv.fr/fr/datasets/r/fc49934a-9d09-4f0b-b26c-a04054468004</u>

Figure 6: Ratio of house price to GDP per capita (PL/PPH) in the USA, vs. housing rates net of inflation (1975-2019)



Source: Vincent Bénard calculations based on Federal Reserve of St Louis.



Figure 7: Texas Housing Price to GDP per Capita (PL/PPH) Ratio vs. Net Inflation Rates (1975-2019)

Source: Vincent Bénard calculations based on Federal Reserve of St Louis and countryeconomy.com.

Land regulations fuel soaring housing prices

Any real estate is divided into its land share and its built share. By observing, using INSEE data, the evolution of these two components (Figure 8), economists Joseph Comby and Jean Cavailhès¹⁰ note that they diverge sharply from the end of the 1990s. Between 1998 and 2008, the value of French residential buildings (expressed in relation to GDP) increased by 17%, while the value of residential land exploded from 40 to 270% of GDP, an increase of 575%¹¹. If the interest rate were the only variable controlling house prices, such a divergence would not be possible.





Sources: INSEE and Jospeh Comby.



Comby and Cavailhès also calculated (Figure 9) that the share of land values in residential real estate exploded between 1997 and 2008, from 15 to 50%, and then stabilized at around 45%¹². By relating these percentages to the price paid by households for their housing, it appears that the price of land, adjusted for household income, has been multiplied by 6 in this period.



Figure 9: Share of land values in real estate values (France, 1978-2020)

Sources: INSEE, Jospeh Comby and fonciers-en-debats.com.

However, land is not physically scarce in France, a generally flat country where less than 6% of the territory is urbanized to date. The two authors therefore hypothesize that land regulations have prevented the supply of residential land from adapting to changes in land demand.

The case of the United States offers the possibility of verifying this hypothesis insofar as the land rights are governed differently from one State to another, unlike France where the land rights are uniform throughout the territory.

Thus, the land can be governed, depending on the State¹³, either by a "restrictive right"¹⁴ requiring that the constructibility of a land be granted by the political power before being able to file a building permit, or by a "reactive right" postulating that it is the limitation of the right to build that must be the subject of a democratically framed political decision¹⁵. In the 2nd case, "building is easy, preventing it is difficult", while in the 1st, it's just the opposite.

The American academic community has extensively studied the influence of these two types of legislation on real estate prices. Among them, Ed Glaeser (Harvard) and Joseph Gyourko (Wharton), established as early as 2002¹⁶ that the variable that significantly changed the volatility of land prices was the severity of its regulation. Independent economist Wendell Cox¹⁷ confirmed this analysis by analyzing over several decades the evolution of prices and incomes in more than 100 metropolises in the English-speaking world according to their regulations.

The comparison between California and Texas economically and demographically close (15 million inhabitants gained between 1980 and 2020 for each), illustrates concretely the impact of each philosophy of land law on real estate prices. California practically invented the modern restrictive land rights it deployed in the early '70s while Texas banned them at the turn of the '80s.

In Texas, it takes between 3.7 and 4.7 years of GDP per capita to buy a home¹⁸, while it takes between 6 and 7 years in California (and even 10 years at the top of the bubble, see Figure 10)¹⁹. In

Texas, prices were not very sensitive to economic fluctuations, while California suffered the most from the bursting of the "subprime credit" bubble in 2008 ²⁰.

Thus, the more regulations limit the possibility of mobilizing building land, the more prices soar when other cyclical data (demographics, economy, and interest rates) fuel additional demand. Nobel laureate Paul Krugman wrote in 2005 that "in the center of the country, building houses is easy. When the demand for housing increases, metropolises expand just a little more. As a result, housing prices are basically determined by construction costs."²¹ He added that in those states where peripheral urban expansion is not constrained, " a housing bubble simply cannot start".



Figure 10: Housing price to GDP per capita (PL/PPH) ratio in California and Texas (1975-2019)

Source: Vincent Bénard calculations based on the Federal Reserve of St Louis with fixed dates of 31/12 and countryeconomy.com.

French soil law increasingly restrictive erodes purchasing power

France has a restrictive land law that the legislator seems to want to continually strengthen. The legal document that determines what can be built and what cannot be built, the Local Urban Plan (PLU), must be compatible with constantly changing rules, which have the effect of preventing any rapid adaptation of the supply of building land to household demand.

These laws have existed since 1967 but until the 1990s, they mainly affected large and medium-sized cities. It was possible to circumvent the difficulty of building in major cities by building in peri-urban areas. This state of affairs changed with the SRU law of 2000, establishing the obligation to "fight against urban sprawl" throughout the territory within the framework of "Territorial Coherence Schemes" (SCOT), obeying Malthusian rules in terms of opening land to construction. The very rapid implementation of SCOT between 2001 and 2005, and their impact on the scarcity of the opening of building land, coincides with the explosion of real estate prices.

Since the SRU law, all governments have added new legislative layers (Grenelle Laws 1 and 2, ALUR, ELAN...) introducing new environmentally justified restrictions. Recently, the "Climate and



Resilience" law of 2021 introduced the objective of "Zero net artificialization" (ZAN) by 2050. The application of this doctrine will drastically limit the possibilities of building. It will be accompanied by high real estate prices, which are harmful to purchasing power in France, especially for the poorest households.

While the cost of these regulations has not been calculated for France, data exist for the United States. Chang-Tai Hsieh and Enrico Moretti have shown that GDP could increase significantly if the most productive areas of the United States (New York, Silicon Valley) become more accessible²². They find that constraints reduced growth by 36% between 1964 and 2009 due to labour misallocation²³. If land were freer, GDP in 2009 would have been 3.7 percentage points higher, with Malthusian regulations representing a shortfall of \$3,685 per person.

Buying a home could be 20 to 40% cheaper in France.

To determine the magnitude of the additional cost of housing in France compared to what it could be with different regulations, we compared the evolution of the ratio "House Price to GDP per capita" with California and Texas two economically and demographically comparable territories (Figure 11).



Figure 11: Housing price to GDP per capita (PL/PPH) ratio in California, Texas and France (1997-2019)

Source: Source: Vincent Bénard calculations based on the Federal Reserve of St Louis (United States) and CGEDD based on INSEE (France).

Until 2002, French prices were in line with Texas prices with a ratio between 3.5 and 4.5. Since then, prices have almost caught up with the California level. It should be added that economic and demographic growth in France has been much less dynamic than in Texas. We can therefore hypothesize that reactive soil regulation would probably have kept the level of French prices at the same level or even below those observed there.

If the French ratio had evolved around 4.2 (between 3.7 and 4.7), as in Texas, rather than 6, buying a home in France could cost 20 to 40% less (Table 2).



Relating the average price of transactions to their number (810,000 transactions in 2007, 1,068,000 in 2019), the price difference paid by buyers would be 61 billion euros in 2019 (Table 3).

However, statistically speaking, the group of home buyers, which includes many first-time buyers (between 32 and 55% depending on the years since 2000), is less wealthy than that of sellers. The "price of scarcity" of housing in France therefore causes an annual "anti-social transfer" of about 61 billion euros (or 2.6% of GDP). Our land laws are an aggravating factor in material and property inequalities between households. They penalize buyers but also their tenants by ricochet, when the goods are not intended for personal use.

France, €	2007	2019
Observed median price of older dwellings	192 800	209 100
GDP/capita	30 592	36 116
Maximum "potential" price (PL/PPH=4.7)	143 800	169 700
Average "potential" price (PL/PPH=4.2)	128 500	151 700
Minimum "potential" price (PL/PPH=3.7)	113 200	133 600
Average difference in current €	+64 300	+57 400
[range]	[49 000 - 79 600]	[39 400 - 75 500]
Average difference as % of price paid	33,3%	27,4%
[range]	[25,4 % - 41,2%]	[18,8 % - 36,1%]

Table 2: Observed vs. potential housing prices in France (2007 and 2019)

Source: Vincent Bénard calculations on old housing, € current.

Table 3: Total additional cost of real estate transactions for buyers in France (2007 and 2019)

France, billion €	2007 (810 000 transactions)	2019(1 068 000 transactions)
Transaction	810 000	1 068 000
Actual total amount observed	156	223
Total potential amount if PL/DCP = 4.2	104	162
Difference between price paid and potential price	+52	+61
[Interval (PL/DCP between 4.7 and 3.7)]	[39-64]	[42-81]

Source: Vincent Bénard calculations on old housing, € current.

Lowering housing prices through a new, responsive land right that brings benefits

Lowering the cost of housing would have many other advantages. In France, two-thirds of the increase in the populations of economically dynamic urban areas took place in peri-urban rings, compared with only one third for central agglomerations, although these provide 82% of job creation in the territory.

In the event of a drop in housing prices in large cities, some households may choose to move closer to it, or even live there. The geographer Eric Charmes²⁴ estimated, in the middle of the last decade, at 2,400 euros annually the additional cost related to travel for peri-urban households. In addition to



the deleterious effect on the purchasing power of the households concerned, this also contributes to a significant increase in their greenhouse gas emissions.

Households could also devote part of the savings made on land to building new homes that are much more energy-efficient, again for the greater benefit of the environment.

Finally, easier access to housing would also considerably reduce the need for public interventions with a social purpose in housing, which exceed 40 billion euros annually. In the current state of public finances, can our governments ignore such sources of savings?

A return to a reactive land law, as experienced by our German neighbours, for example, would bring housing prices back to a reasonable level in a sustainable manner. In times of inflation, it is a lever to restore purchasing power.

Proposals on land to free up purchasing power

1. Unleashing the constructability of land by changing the philosophy of Local Urban Plans

Reverse the philosophy of PLU by declaring any land free of use (therefore constructible) by default as long as it is serviced, and allow limitations only under the obligation to compensate owners penalized by the blocking of constructability. The compensation will take the form of a discount on local taxation or the payment of rent to compensate for the loss of partial enjoyment of the right of ownership. This obligation of financial compensation will create an incentive to reduce protected territories to what is strictly necessary.

Provide that land servicing costs cannot be borne by the community, which will encourage preference for construction by contiguity with existing neighbourhoods.

Relax building rules in neighbourhoods without historical character, and in particular remove the brakes on high-rise construction in neighbourhoods of large cities where there is a market for this type of housing.

2. Create a right of petition for the benefit of owners blocked by the Local Urban Plan

Any owner who considers that the zoning of his land imposes unjustified restrictions on him will be able to exercise a right of reasoned petition requesting a new zoning. The municipality will have to respond within 3 to 6 months, depending on the size of the land and the nature of the petitioner's project. The absence of a response will be equal to acceptance by the local authorities. This new right will make it possible to release the land without waiting for a process of revision of the PLU, which is very slow by design.



3. TAXES ON PRODUCTS HARM PURCHASING POWER

The findings:

French households are victims of an inflationary spiral fueled by taxes on products and in particular specific taxes in addition to VAT.

The challenges:

Stop the introduction of new product taxes (excluding VAT) and rate increases. Stop the stacking of taxes.

Total consumption taxes are higher in France (12.3% of GDP) than in the European Union (11.3%) and Germany (10.1%) in 2021 (Figure 18).

Taxes on consumption, referred to as "taxes on products" in the European System of Public Accountancy (aggregate D.21), are "indirect" taxes. It is considered that they have been collected by companies selling goods or services and, with some exceptions, economically supported by the final consumer of these products.

The most significant of these taxes is the Value Added Tax (VAT). Its performance is in line with neighboring countries, where France is at the level of the EU average (7.4% of GDP) and slightly above Germany (7.2% of GDP). Created in 1954 (Zoom 1) VAT comprises 4 rates in metropolitan France: 2.1%, 5.5%, 10% or 20%²⁵. With a yield of 185 billion euros in 2021, it is the primary source of financing for the State, before the CSG (129 billion euros) and all other taxes²⁶.

The gap with our neighbours is linked to other taxes on products. They represent 4.9% of GDP in France compared to 3.9% in the European Union and 2.9% in Germany. These taxes target specific expenditures and amount to €123 billion per year. For centuries, France has had "sin" taxes targeting certain consumption (tobacco, gambling, drinks), but also taxes targeting foresight (insurance), patrimonial operations (transfer taxes on real estate transactions) or negative externalities (fuels and pollution).

An additional annual cost of €600 for households compared to the EU

We estimate that taxes on products represent around \notin 7,400 in France per household and per year, of which \notin 4,400 is VAT and \notin 3,000 represents other taxes²⁷ (Figure 12).

The additional cost for an average French household represents around ≤ 600 per year compared to the EU average and $\leq 1,300$ per year compared to Germany²⁸. These differences are almost entirely due to other taxes on products, which are particularly large in France (Figure 13).



Figure 12: How much tax on products for an average household and what gap vs. EU or Germany (€, 2021)

Impôts sur les produits	Moyenne par ménage	dont TVA	dont autres taxes sur les produits
France		7 439 €	4 464 € 2 976 €
si la France avait la fiscalité de l'UE	6 83	5€	4 464 € 2 368 €
surcoût pour les ménages vs l'UE	605 €	0 €	607€
si la France avait la fiscalité de l'Allemagne	6 109 €		4 343 € 1 761 €
surcoût pour les ménages vs l'Allemagne	1 331 €	121 €	1 215 €

Source: Calculations by Institut économique Molinari based on Eurostat, Main fiscal aggregates of national accounts [gov_10a_taxag] and Number of households [Ifst_hhnhwhtc], calculations made assuming that households bear 75% of the incidence of taxes on products and the differences in the weight of taxes on products as a percentage of GDP.

Par ménage en 2021

Figure 13: How much tax on products per household in France in addition to VAT (\in , 2021)

Taxes sur l'énergie (carburants, électricité, gaz)	1 041 €	
Taxes sur les transactions immobilières et les constructions	542 €	
Taxes sur les assurances	398 €	
Taxes sur les tabacs	370 €	
Taxes sur les loteries, les jeux et les paris	118€	
Taxes sur les boissons	115€	
Taxes sur les importations et octrois de mer	115€	
Taxes sur la pollution	53 €	
Taxes sur les véhicules	52 €	
Divers (transactions, transports, services, cinéma, numérique, médicaments)	198 €	
Taxes sur les produits (hors TVA) par ménage		2 976 €

Source: Institut économique Molinari according to Eurostat, D21, NTL questionnaire - Detailed list of taxes and social

contributions according to national classification and Number of households [Ifst_hhnhwhtc], calculations made assuming that households bear 75% of the incidence of taxes on products.

Stacks of behavioural taxes and VAT

The best-known specific taxes on products are the Domestic consumption tax on energy products (TICPE) and the Consumption duty on tobacco products (DCT). They complement and reinforce the effect of VAT well beyond the standard rate of 20%.

The TICPE on fuels represents between 68 and 97% of the pre-tax price, depending on whether diesel or super SP 95 are considered, which put France among the champions of fuel taxation. France is not the country that taxes fuel the most in Europe. It is second out of 27 for diesel, behind Finland, and 5th for unleaded 95. (Figure 15).

The DCT on tobaccos represents between 414 and 434% of the pre-tax price of a pack of cigarettes, depending on whether one considers it a "premium" or "low market" product.

These specific taxes constitute revenues that are all the more significant for public finances as users are dependent on these products. The car is an indispensable mode of transport for many French



people, especially for those who work²⁹, without counting those who live in sparsely populated areas.³⁰ Tobacco use is known to cause habituation or even addiction among those who particularly appreciate this product.

These taxes are combined. Fuel and cigarettes are subject to 20% VAT, as are goods or services taxed at the full rate of VAT. But they are also subject to VAT on their specific excise duties. VAT is applied to both DCT and TICPE, which is frequently criticized by consumer associations³¹. This represents an additional cost ranging from 14 to 19% of the pre-tax price for fuel and from 83 to 87% for cigarettes. The real VAT rates vary therefore from 34 to 39% for fuel and 103 to 107% for cigarettes (Figure 17).

In practice, the taxes borne by consumers are even higher, since the costs of producing these products include other taxes whose impact is passed on to their users (production taxes, income taxes). They are particularly significant in the case of fuels, which are subject to significant production taxes in the countries of extraction as part of the oil rent³².

	Gazole	SP 95
Prix de vente à la pompe TTC	1,80 €	1,69 €
Taxes sur les produits	0,91 €	0,97 €
TICPE (Taxe intérieure de consommation sur les produits énergétiques)	0,61 €	0,69 €
TVA sur la TIPCE	0,12 €	0,14 €
TVA sur le prix de vente hors taxes	0,18 €	0,14 €
Coût hors taxes (production et distribution)	0,89 €	0,71 €
Part des taxes dans le prix de vente à la pompe	50%	58%
Impact des fiscalités vs le coût hors taxes	102%	136%

Figure 14: Impact of TICPE and VAT on fuel prices in France

Source: Calculations Institut économique Molinari according to UFIP, price as of 11/11/2022.

Gazole 0,91 **0,91** 0,94 0,86 0,77 0,79 0,80 0,81 0,81 0,82 0,83 0,64 0,65 0,65 0,66 0,68 0,68 0,68 0,70 0,70 0,70 0,72 0,72 0,74 0.61 0.61 0.43 Bulgarie Portugal Tchéquie Lituanie Estonie Espagne Slovaquie Croatie Lettonie Pays-Bas llemagne Irlande Belgique Autriche Grèce Suède France Finlande Hongrie Chypre Slovénie anemark Pologne Malte uxembourg Italie Roumanie

Figure 15: Positioning of France vs. the EU in terms of fuel taxation (TICPE or equivalent and VAT).





Source: Calculations Institut économique Molinari according to European Commission, Energy Policy, prices as of 07/11/2022.

Figure 16: Impact of CSD and VAT on cigarette prices in France					
	Cigarettes bas de marché	Cigarettes premium			
Prix de vente au comptoir	10,00 €	10,50 €			
Taxes sur les produits	8,44 €	8,80 €			
DCT (Droit de consommation sur les tabacs)	6,77 €	7,05 €			
TVA sur le DCT	1,35 €	1,41 €			
TVA sur le prix hors taxes	0,31 €	0,34 €			
Coût hors taxe (production et distribution)	1,56 €	1,70 €			
Part des taxes dans le prix de vente	84%	84%			
Impact des fiscalités vs le coût hors taxes	540%	517%			

Figure 16. Improved of CCD and VAT on signification prices in France

Source: Institut économique Molinari with Customs as of 11/11/2022.

Figure 17 Taxation as % of the price excluding taxes: fuel is taxed 6 times more than goods at 20% VAT and cigarettes are taxed 26 times more



Source : Calculations Institut économique Molinari according to customs and Ministry of Economy and Finance with prices and taxation in force on 11/11/2022.



On average 2,660 euros in taxes for a motorist who smokes

The cost of fuel taxation is of the order of 610 euros per year for a car with an average mileage (8200 kilometres for petrol and 12 400 for diesel) with average consumption (6.8 litres per 100 km for a petrol vehicle and 5.9 for a diesel one).³³ It consists of 420 euros of TICPE, 80 euros of VAT on TICPE and 110 euros of standard VAT on fuel.

The cost of tobacco taxation is 2,050 euros per year for an average smoker consuming 13 cigarettes a day³⁴. It consists of 1,640 euros of DCT, 330 euros of VAT on DCT and 80 euros of standard VAT on cigarettes.

This lifestyle is expensive. An average single employee without children in France has a salary net of contributions and income tax of 26,800 euros per year. Smoking costs them 7.6% of their net income and driving a car 2.3% for fuel, not to mention the other additional costs associated with owning a car (insurance ...).³⁵

Taxes that irritate

These so-called indirect taxes are far from painless. They have gradually become a major source of funding for the welfare states of our rich democracies, as Junko Kato, a professor of political science in Tokyo, has shown³⁶. History teaches us that indirect taxes are the ones that most often trigger a revolt.

Everyone remembers the stupor of politicians in the face of the movement of "yellow vests" caused by an increase in fuel taxation, a priori painless. Indeed, standard tax theory considers direct taxation to be much more painful than indirect taxation. Thus, income tax would be less easily granted than indirect taxes, such as VAT or excise duties, designed to ensure that their collection rests with an actor who is not the payer.

As mentioned above, when VAT and excise duties are aggregated, there are extraordinary taxes on products for popular use. Fuels are on average taxed 6 times more than goods at 20% VAT, and cigarettes are taxed 26 times more (Figure 17).

These tax concentrations are far from trivial. In a study published in the British Journal of Sociology, sociologists Isaac William Martin and Nadav Gabay have shown that indirect taxation – and more particularly excise and customs duties – is the least accepted.³⁷

Contrary to conventional beliefs about taxation, it is over-represented in 475 episodes of tax revolt studied in 20 wealthy democracies between 1980 and 2010. They show that tax revolts are certainly linked to the weight of the tax in question. The higher the weight of a tax, the greater the probability that it will become the target of popular mobilization in any year. But, more importantly and contrary to standard theory, they highlight that in rich democratic countries, at the turn of the twenty-first century, it is more often the excise duty payers who shout the loudest.

The episode of the "yellow vests" corresponds perfectly to the observation of Isaac William Martin and Nadav Gabay. Indirect taxes, regressive and concentrated on a particular group, present a significant political risk, that of provoking revolts.



Moreover, if on paper, the stated objective of behavioural taxes is that of public health, several reasons explain why this objective is generally not achieved in reality. The introduction of the tax may indeed have unexpected effects. While official sales of the overtaxed product are certainly likely to fall, consumers tend to substitute it with another product that is just as harmful or even more harmful than the one targeted if their preferences have not been changed. This ultimately compromises the achievement of the health objectives declared by the public authorities.

These circumvention practices are also illustrated in the development of parallel markets. These markets can take the form of cross-border purchases - as in the case of the *fat tax* in 2011 which massively pushed Danes to buy their products in Germany or Sweden - and/or "under the counter" purchases. These phenomena are part of an unavoidable economic logic. As soon as the price of a product is artificially disconnected from economic reality because of taxes, it creates a profit margin that traffickers do not hesitate to appropriate, especially as soon as it exceeds the risks and costs of being caught.

In the public debate we often lose sight of the fact that it is not the nature of the overtaxed product per se, or the "vice", that is at the origin of the smuggling, but the taxation that is the necessary and sufficient cause. Even products as "mundane" as salt or soap quickly become the object of smuggling, when they are heavily taxed. Taxes stimulate the black market and smuggling all the more because they are accompanied by value-added taxes and are "regressive", i.e. they hit low-income people relatively harder. Indeed, they will be the first to resort to the black market because of their need to preserve their purchasing power.

These circumvention practices, which can also sometimes give rise to tax revolts, have political, financial and social costs that would be better considered in public trajectories. It is not certain that the preservation of consent to taxation, a fundamental dimension in the functioning of our democracies, is properly integrated by our decision-makers. In a country where public revenues are almost 6 points higher than in the European Union³⁸, we would be entitled to demand a complete moratorium on tax increases, especially on indirect taxes that are less painless than expected, if only to give ourselves a chance to preserve our capacity to coexist.

Product tax proposals to free up purchasing power

1. Establish a moratorium on taxes on products other than VAT

Stop the introduction of new product taxes (excluding VAT) and rate increases. Government revenues must be increased by broadening pre-existing tax bases, to avoid tax sprawl and the multiplication of special taxes.

2. Stop taxing taxes

Stop the stacking of taxes. The imposition of VAT on certain taxes on products is an anomaly. VAT is supposed to tax value added and not other taxes that do not create any added value.



	Total (D21)	dont taxes du type TVA	dont autres taxes (accises, immobilier, assurances)
Croatie	18,1	13,1	5,0
Hongrie	15,7	9,9	5,8
Bulgarie	13,9	9,4	4,5
Portugal	13,7	8,9	4,8
Finlande	13,7	9,4	4,3
Danemark	13,6	10,0	3,6
Grèce	13,6	8,2	5,4
Pologne	13,1	8,6	4,5
Estonie	12,6	9,1	3,5
Lettonie	12,5	8,4	4,1
France	12,3	7,4	4,9
Chypre	12,3	9,1	3,2
Slovénie	12,2	8,2	4,0
Lituanie	11,9	8,4	3,5
Belgique	11,8	6,9	4,9
Italie	11,7	6,8	4,9
Suède	11,7	9,2	2,5
Union européenne	11,3	7,4	3,9
Slovaquie	11,3	7,6	3,7
Pays-Bas	11,2	7,6	3,6
Zone euro	11,1	7,2	3,9
Tchéquie	11,0	7,6	3,4
Autriche	10,8	7,6	3,2
Espagne	10,4	6,9	3,5
Malte	10,4	6,8	3,6
Allemagne	10,1	7,2	2,9
Roumanie	10,0	6,5	3,5
Irlande	6,2	3,9	2,3

Figure 18: Taxes on products in Europe (% of GDP 2021)

Source: Institut économique Molinari based on Eurostat, D21, Main fiscal aggregates of national accounts [gov_10a_taxag].



Zoom 1: Indirect taxes on consumption

A distinction is made between direct and indirect taxes depending on whether the payer of the tax is the actual taxpayer or whether he passes on the amount of tax to a third party.

Direct taxes affect a taxpayer by name and are based on a specific base such as income or wealth. The best known are personal income tax and corporate income tax. The theory of tax incidence shows that there may, however, exist, even for this direct tax, mechanisms for deferring the tax burden to third parties that are not provided for by the legislator (Sauveplane and Simula, 2017³⁹).

Indirect taxes are those that are designed to indirectly affect economic agents. They are said to be indirect because tax collection was built to rest on an actor who is not the payer. There are two main types of indirect taxes: ad valorem taxes, such as VAT, and excise duties, expressed per unit of goods.

Despite the emergence of income tax during the First World War, France still relied heavily on indirect taxes. In 1954, it created the VAT, which became one of the pillars of its tax system. In addition, it has maintained or even increased its excise duties on petroleum products or tobacco.

In 1980, the weight of indirect taxes still represented 60% of total tax revenues, compared to only 22% in the United States (Morgan and Prasard, 2009⁴⁰). Income tax in France is one of the least significant in terms of tax revenue in developed economies (Tournié, 1985⁴¹; Asselain, 2006⁴²).

Indirect taxes are efficient and profitable, but regressive (Atkinson and Stiglitz, 1976⁴³; Decoster et al., 2010⁴⁴; Ruiz and Trannoy, 2006⁴⁵), i.e. they affect, by their structure, the lowest incomes in the first place. Ruiz and Trannoy (2006) showed, for example, that the various specific duties are three times more costly for the poorest 10% of households compared to the wealthiest 10% (they cost 5.10% of gross disposable income to households in the 1st decile vs. 1.68% for households in the 10th decile as fuel duties, insurance, alcohol or tobacco), VAT being less regressive with a ratio of 2 to 1 (11.52% vs. 5.92%).

Moreover, these taxes are less sensitive to economic fluctuations. In periods of growth, they will tend to yield less than an income tax. While in periods of recession, tax revenues will be less subject to cyclical shocks (Kato, 2003⁴⁶).

This historical anchoring of the structure of our taxation oriented towards regressive taxes (Steinmo, 1993; Volkerink and de Haan, 1999; Genschel, 2002; Wilensky, 2002⁴⁷; Kato, 2003; Ruiz and Trannoy, 2006), today adds a mental dimension. Taxing must encourage consumers to change their behaviour by limiting the use of cars or cigarettes. The tax aims in the first case to limit the environmental impact of cars and in the second case to reduce the negative effects of tobacco on our redistributive health system.

Also, the tax system must meet this twofold, sometimes contradictory obligation. On the one hand, to ensure its revenues to perpetuate the welfare state, without it being the poorest who contribute the most. On the other hand, to have a tax system that is sufficiently incentivized to dissuade certain behaviours deemed "untrue" to the general interest. The question is: do indirect taxes fulfil this dual obligation?



4. THE IMPACT OF PRODUCTION TAXES UNDERMINES PURCHASING POWER

The findings:

Employees in France are penalized by the tax incidence of production taxes, which have a negative impact on their remuneration.

The challenge:

Aligning production taxes with the EU average would restore purchasing power to workers and reduce French over-unemployment.

Production taxes remain abnormally high in France

Despite the movement to reduce production taxation that began in 2021 as part of France Recovery, production taxes remain particularly significant. They represented 4.5% of GDP last year, compared to 2.5% in the EU and 1% in Germany, when households and administrations are included. They were 2 times higher in France than in the EU and 5 times higher than in Germany (Figure 19).

When you consider their actual cost, by removing the subsidies, the differences are even greater. Net taxes on production accounted for 1.8% of GDP in France, compared with 0.2% in the EU and -1.6% in Germany. They were 9 times higher in France than in the EU and Germany subsidized its production as much as France taxed its own (Figure 20).

When considering the impact on the non-agricultural market sector, net production taxes accounted for 1.9% of GDP in France in 2021, compared to 0.4% in the EU and -0.9% in Germany. They were 5 times higher in France than in the EU, while Germany subsidized its production significantly (Figure 21).

The impact of corporate taxation affects wages

A significant part of the population believes – wrongly – to be spared by this taxation, most of which targets companies⁴⁸. For the general public, companies pay taxes that specifically target them (employer social contributions, taxes on profits, etc.) and households assume the taxation targeting them (employee contributions, income tax, VAT).

In fact, economic analysis shows that the reality is much more complex. Households indirectly bear taxes targeting businesses. Indeed, producers are not content to pass on taxation on products (VAT, specific taxes, etc.). Their ability to develop – or even survive – is often conditioned on the transfer of taxes targeting companies to households.



Since the creation of economics, this reality has been identified by its founding fathers. They highlighted the deferral of taxes on consumers and, failing that, on producers with weak market power (Zoom 2).

This approach was taken up in 1962 by Harberger. In line with him, a large number of studies have quantified the impact of taxation targeting businesses on consumers, employees or owners of capital. They show that employees bear a significant tax burden in open economies, in the form of more contained wage increases, less attractive career opportunities or even periods of unemployment (Zoom 3).



Figure 19: Taxes on production (% of GDP)





Source: calculations Institut économique Molinari of D29 & D29-D39 with Eurostat [nama_10_gdp]. This tax primarily targets companies that pay 68% of D29 in the EU, with households and administrations paying the balance.



Figure 21 : Production taxes in Europe (in % of GDP 2021)

	Impôts de production (D29) tous secteurs	Impôts nets de subventions (D29- D39) tous secteurs	Impôts nets de subventions (D29-D39) secteur marchand (hors agriculture, ménages et administrations)
Union européenne	2.5	0.2	0.4
Zone euro	2.3	-0.1	0.4
Belgique	2.1	-1.4	0.0
Bulgarie	1.2	-3.4	-1.0
Tchéquie	0.7	-1.3	-0.4
Danemark	2.2	0.0	1.0
Allemagne	1.0	-1.6	-0.9
Estonie	0.7	-0.8	0.0
Irlande	0.9	-0.7	-0.1
Grèce	3.4	-1.9	-0.5
Espagne	2.0	0.8	1.3
France	4.5	1.8	1.9
Croatie	1.0	-1.3	
Italie	3.0	2.1	1.7
Chypre	2.0	-0.3	-0.1
Lettonie	1.1	-2.6	-0.7
Lituanie	0.4	-1.3	-0.7
Luxembourg	2.4	1.7	1.9
Hongrie	2.0	0.3	1.2
Malte	0.6	-3.0	-2.5
Pays-Bas	1.5	-1.9	-1.0
Autriche	3.3	-1.3	-0.9
Pologne	2.4	0.6	1.2
Portugal	1.6	-1.1	0.0
Roumanie	0.8	-0.2	0.5
Slovénie	1.1	-1.7	-0.9
Slovaquie	1.0	-0.7	0.0
Finlande	0.3	-1.2	-0.5
Suède	9.9	8.1	

Source: calculations Institut économique Molinari based on Eurostat, [nama_10_gdp] all sectors and [nama_10_a64] for the market sector (Nace B to N).



Compared to the EU, an annual additional cost of 900 euros net for an average employee

We assessed the effect on the purchasing power of an average employee of the excess taxation of French production.⁴⁹

There were on average 2,675 euros in production taxes per employee in the market sector in 2021. This level was abnormally high vis-à-vis the EU (excess of 78% or 2,081 euros per employee) or Germany (excess of 145% or 3,873 euros per employee see Figure 22).

The negative impact on purchasing power was calculated by considering that an excess of 1 euro in tax on production reduces the wage bill by 0.87 euros (ratio obtained from a review of the economic literature - Zoom 3) and social and fiscal pressure.

It shows that French overtaxation of production taxes penalizes an average employee by 900 euros per year, if we compare France to the EU. Vis-à-vis Germany, the impact is even more significant, with a loss of 1,700 euros in purchasing power per year.

This order of magnitude is representative for an average employee. Depending on the situation, it is likely to result in less attractive remuneration (lower hiring salary and/or salary progression) or more frequent or lasting periods of unemployment.

Figure 22: Impact of excess production taxes for an average employee vs. EU or Germany (% GDP and € 2021)

Surcoût et manque à gagner lié à la fiscalité de production française	Proportion des impots de prodution en trop (en %)	Impôts de production en trop par salarié en France	Incidence négative sur la masse salariale d'un salarié moyen	Pouvoir d'achat perdu par un salarié moyen (net de cotisations sociales et d'impôt sur le revenu)
vs l'UE	78%	2 081 €	1 818 €	891 €
vs l'Allemagne	145%	3 873 €	3 382 €	1 659 €

Source: Calculations Institut économique Molinari according to Eurostat [nama_10_a64] and [nama_10_a64_a] for the market sector (Nace B to N) for 2021 assuming that ≤ 1 more production tax than the average reduces the wage bill by ≤ 0.87 in the long term.

Production tax proposals to free up purchasing power

1. Aligning French production taxes with the EU average

Amplify the movement to reduce production taxes, going beyond the announced trajectory, in order to align with the European average over a 5-year horizon.

2. Compensate for the loss of revenue for local authorities through a sharing of traditional taxes

Establish a sharing of corporate tax (IS) between the State and local authorities. Allocating part of the corporate tax to local authorities will create a strong link with wealth creation in their territories.

Better involving local authorities in VAT revenues will make it possible to secure the financing of local authorities, the base of this taxation being broad and benefiting from significant inertia.

Chapter written by Cécile Philippe and Nicolas Marques



Zoom 2: Tax impact, or how corporate taxation affects households

Who pays the compulsory levies? Some believe that some of it is paid by businesses and some by households. This simplistic reading grid is often used to classify policies according to whether they are favourable to producers (the policy of supply) or to consumers (the policy of demand). In practice, these dividing lines are reductive, with taxation targeting producers spilling over to households through different channels, depending on whether they are consumers, owners of capital or consumers.

As early as 1776, Adam Smith pointed out that many "taxes are not ultimately borne by the fund or source of income on which they were intended to be charged." ⁵⁰ Often, «Tax is paid, ultimately, by the last buyer or consumer." ⁵¹ At the end of the 1820s, Jean-Baptiste Say stressed that "Every tax is a burden that the taxpayer seeks to pass on to the other members of society." ⁵² For the French industrialist and economist, "the tax that the producer is obliged to pay is part of his production costs (...) it must increase the price of its products; and in this way makes its consumers bear at least a large part of the tax." ⁵³

Closer to home, the work of Arnold Harberger shows that corporate taxes penalize consumers, shareholders and employees in varying proportions depending on the nature of the markets.⁵⁴

Ultimately, the tax burden targeting companies always ends up on natural persons "owners of capital, employees and/or consumers" ⁵⁵. Economists agree that taxation impacts the structures and factors that are least reactive and have the fewest alternatives, in line with Maurice Lauré's intuition that "the repercussions are from the economically strong to the economically weak".⁵⁶

Simula and Trannoy point out in particular that "the flight movement of the mobile factor allows it to partly evade the tax and, thus, to divert the burden of the tax on other factors"⁵⁷. They conclude that a very substantial part of the tax targeting companies in France, a country involved in international trade, rests on the shoulders of employees. In an open world, with customers playing the competition, mobile shareholders in the medium term, it is often the employee who bears the brunt of taxation.



Zoom 3: The negative impact of taxation on wages is widely documented

In line with Arnold Harberger's 1962 article, a large number of studies quantify the impact of taxation targeting companies on wages. They attest that households bear a significant share of the impact of corporate taxes through remuneration, independently of other channels of transmission of taxation (prices, return on capital, etc.).

Harberger (1995) estimates that the burden on labour is 2 to 2.5 times greater than the amount of corporate tax collected in a small economy in an open economy.⁵⁸

Hasset and Mathur (2006) estimate that a 10% increase in the corporate tax rate is associated with an 8% decrease in the manufacturing wage rate.⁵⁹

Felix (2007) estimates that a 1% increase in corporate tax reduces gross annual salary by 0.7%. Its estimate for the United States leads to a burden on labor four times greater than the amount of corporate tax collected.⁶⁰

Harberger (2008) leads in one of its scenarios to a transfer of the incidence of corporation tax to employees of 130%, and thus to a phenomenon of overcompensation to the detriment of this category.⁶¹

Arulampalan et al. (2007) use data on 55,082 enterprises located in nine European countries over the period 1996-2003. In their central scenario, a \$1 tax increase reduces payroll by \$0.92* over the long term.⁶²

Aus dem Moore and Kasten (2009) conclude that manufacturing wages grew 1.21% faster as a result of Germany's corporate tax cut in the 2000s⁶³. In another paper the same year, they concluded using German, French and British data that a \$1 increase in corporate tax per employee translates into a wage decrease of between \$0.80* and \$1.17*.

Arulampalam et al. (2012) analyze the direct effect of corporate tax on wages can be identified in a negotiating framework using inter-firm changes in tax burdens. They estimate that, on average, a \$1 tax increase reduces wages by \$0.49*.⁶⁴

Aus dem Moore [2014] concludes that an increase of ≤ 1 in corporation tax per employee translates into a short-term wage reduction in France of ≤ 0.39 and $\leq 0.66^*$ in the long term. In the United Kingdom, an increase of GBP 1 in corporation tax per employee translates into a short-term wage reduction of GBP 0.40 and a long-term wage reduction of GBP 0.73.⁶⁵

Ljungqvist and Smolyansky (2018) analyzed the tax-employment-wage nexus by examining 250 corporate tax changes in U.S. counties between 1970 and 2010 to assess their impact on employment and income. On average, they find that a one-percentage-point reduction in corporate tax rates leads to a 0.2 per cent increase in employment and a 0.3 per cent increase in wages.⁶⁶

Fuest et al. [2017] estimate the impact of corporate tax on wages using a 20-year panel of German municipalities with 6,800 tax changes. They conclude that 51% of the corporate tax burden is shifted to employees⁶⁷.

Bentata [2021] estimates that a \in 35 billion reduction in production taxes would increase the wage bill by \in 42 billion in France in the medium term. In their projection, a \in 1 decrease in taxation translates into a payroll gain of \in 1.2*.⁶⁸

Malgouyres et al. [2021] refine the identification of tax incidence with a spatial equilibrium model developed by other authors with imperfectly mobile firms. They conclude that the tax burden borne by employees is 36%.⁶⁹

Note : These results are not all homogeneous. Some studies describe the sharing (in %) of the impact. Others value, in monetary units, the loss or gain of payroll related to taxation. We used the average of these (currency ratios indicated by an *) to quantify the impact of production taxes. This approach is defensive, since most of this work concerns taxes on profits that are less harmful than taxation of production.⁷⁰

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5. LACK OF PENSION DIVERSIFICATION HURTS PURCHASING POWER

The findings

French pensions, which depend almost exclusively on a pay-as-you-go system in the private sector and unfunded in the public sector, are less attractive because of the declining birth rate, which reduces the resources available to finance benefits.

The challenges

Diversify the method of financing, to improve contributions and pensions in setting up collective capitalization for all private sector employees, on the model of the ERAFP for civil servants.

For a structural reason independent of the return of inflation, purchasing power in France has been undermined for decades. The almost exclusive use of a pay-as-you-go system to fund pensions has been increasing labour costs and squeezing take-home wages since the baby boom counter-shock.

The fall in birth rate makes the pay-as-you-go system less attractive

Beyond the arrangements put in place to preserve purchasing power, with mechanisms to reduce charges on low wages, bonuses or tax-free overtime, the heart of the problem is the particularly expensive method of financing French pensions.

Purchasing power, which stems from the ability to create wealth, has been at the heart of concerns for years. France experienced weaker economic growth than the rest of the European countries in the 2010s, which weighed on wage growth. This phenomenon is, in part, linked to a French particularity: the weight of social contributions. They exceed salaries net of taxes according to our latest annual barometer (102%). This is unique in the European Union, where social security contributions represent on average 52% of wages net of tax.⁷¹

Contrary to popular belief, this differential is not explained by the generosity of our Social Security, all our major European neighbours have social protections that are at least as comprehensive. The provision of social protection in France is not more qualitative. More specifically, the weight of social protection expenditure in French GDP (34%) is close to Germany (30%) or Italy and the Netherlands (29%). Per capita social protection expenditure in France ($\leq 12,200$) is equivalent to that of Germany ($\leq 12,600$) and lower than in the Netherlands ($\leq 13,500$), and OECD projections show that future replacement rates will be average, despite the size of pension contributions which represent 28% of gross wages (Figure 23).





Figure 23: In France, the return on investment of pensions is average

Source: Institut économique Molinari based on OECD with compulsory public and private schemes and future net replacement rates calculated as a percentage of net life wages⁷².

Private pensions, which are almost exclusively pay-as-you-go, absorb 28% of gross salaries

The additional French cost in terms of social security contributions is above all the consequence of the almost exclusive financing of pensions by pay-as-you-go. This state of affairs is the consequence of a long process of placing under supervision and then extinguishing the collective capitalizations which had appeared. Initiated in 1854 in the public sector, with the dismantling of the departmental retention funds, this process reached its peak with the extinction of collective capitalizations at the end of the Second World War⁷³. Since then, the situation has never been corrected in France. Despite their advantages, individual or group retirement savings plans (PER) represent only a marginal share. In 2019, funded arrangements accounted for 4.2% of contributions and 2.1% of benefits in France⁷⁴.

However, the distribution shifts the purchasing power of the active to the retired without creating any. It is problematic for the purchasing power of the active in an ageing society. When it was introduced in 1941 and generalized at the Liberation in the private sector, the situation was favourable. There were 4 contributors to the Cnav to finance a pensioner with a small pension in 1956⁷⁵, at a time when retirement mobilized only 5% of GDP.

Today, the situation is radically different. There are almost 3 times fewer contributors to finance a pensioner (1.4 contributors for a pensioner to the Cnav) with a significant pension, for an incidentally longer period⁷⁶, in a country where pensions paid by the pay-as-you-go or the budget absorb about 14% of GDP.





Figure 24: Fewer contributors and 3 times more expenditure on pensions

Source: Institut économique Molinari according to Cnav and INSEE

As a result, social security contributions have exploded, increasing labour costs, and squeezing net wages. This scissors effect generates a double penalty with a lack of competitiveness and a purchasing power of employees reduced by pension contributions representing 28% of gross salaries in the private sector. The situation in the public sector is even worse because of the demographic imbalances in the state civil service. The latter does not have a pension plan in the private sector sense. It is destabilizing public finances, which have been systematically in deficit since the shock of the baby boom⁷⁷.

In comparison with a mixed system, a shortfall of 1700 euros for an average employee

While theoretically the "implicit" return on allocation may equal that on funding in some circumstances⁷⁸, the reality has been different since the baby boom shock. A very large number of studies point out that the profitability of financial investments is now greater than the development of the economy, thus indicating that the choice of full distribution practiced in France causes losses for employees (Zoom 4).

Capitalization, especially when it is collective, is an economic way of financing pensions. It makes it possible to rely on the performance of the financial markets, which improve the contributions resulting from compulsory levies. From an individual point of view, with the same amount of compulsory contributions, capitalization generates better pensions than pay-as-you-go. A part of the pensions is financed by gains related to investments (dividends, capital gains, etc.), which makes it possible to reduce pension contributions and/or increase net wages for the same pension. From a macroeconomic point of view, capitalization makes it possible to save compulsory levies, by improving the quality/price ratio of public services, but also to allocate more capital to the financing of the economy.⁷⁹

Therefore, Dutch employees with significant pension funds will have more generous future pensions than in France (Figure 23). With 25% of contributions, 3 points less than in France (28%), the Dutch should have a replacement rate of 89% of net salary, 15 points more than in France (74%).

Also, there is a relative consensus among economists that the long-term return on funding is two to three times higher than the "implicit" return on distribution since the baby boom countershock. Under these conditions, half or even two-thirds of the contributions paid on a pay-as-you-go basis



constitute an "implicit tax". As Davanne and Pujol point out, by investing in the markets, one could obtain the same pension with half the effort rate⁸⁰.

It should be noted that the economists' standard recommendation is to operate in a mixed system, combining distribution and capitalization. The combination of allocation and funding makes sense, even when the return on allocation is low (Zoom 5).

As Philippe Trainar explains, when it comes to pensions, we need to diversify funding sources⁸¹. According to him, "if we take into account the higher volatility of capital income compared to labour income, especially wages, the optimal distribution would be around 33% and 66% respectively for capitalization and distribution in France"⁸².

We have adopted this recommendation and quantified the cost of the lack of pension diversification. To do this, we used the rates of return anticipated by Thomas Piketty in his book *Capital in the XX century*, i.e. 1.5% for the economy – representative of the distribution – and 4.25% for capitalization⁸³.

For an employee whose salary grows with the growth rate of the economy, a mixed system with 2/3 distribution and 1/3 capitalization would allow, for equal contributions, to distribute 29% more pension. The capitalization component would boost the performance of the ensemble. It would finance 48% of the retirement pension whereas it would represent 1/3 of the payments, amounts comparable to that of the supplementary scheme for pharmacists (CAVP) operating both on a pay-as-you-go and funded basisFigure 25: Cost-effectiveness of a mixed system compared to 100% pays-as-you-go and capitalisation systems

Figure 25)⁸⁴. These ratios are comparable to those of the complementary pension plan for pharmacists (CAVP), which operates on both a pay-as-you-go and a funded basis⁸⁵.

Alternatively, a mixed scheme funded by contributions representing 22% of gross salary could distribute the same pensions as the current distribution requiring contributions representing 28% of gross salary. The current situation represents an implicit tax of around 6% of gross salaries, i.e. a shortfall of 1,700 euros net of social contributions⁸⁶.

Figure 25: Cost-effectiveness of a mixed system compared to 100% pays-as-you-go and capitalisation systems





Source: Projections by the Institut économique Molinari for schemes operating on a pay-as-you-go basis (as for private sector employees), on a funded basis (as for Banque de France employees) or on a mixed basis, combining collective pay-as-you-go and funded schemes (as for pharmacists): pay-as-you-go (like private-sector employees), funded (like Banque de France staff) or mixed, combining pay-as-you-go and collective funding (like pharmacists with CAVP) with assumptions taken from Piketty (1.5% economic growth rate and 4.25% rate of return on capital) and the OECD (retirement representing 74% of average net salary calculated over a lifetime for 28% of gross pay-as-you-go).

Generalizing collective capitalization, a challenge for purchasing power and equity

To remedy the loss of purchasing power generated by the under-development of retirement savings, the most egalitarian solution is to generalize collective capitalization to all employees, on the model of what has been done for civil servants with The Establishment for Additional Retirement of the Public Service (ERAFP).

The standard advice is to organize pensions with 3 pillars, one of which is pay-as-you-go, one is mandatory collective funding, and one is optional⁸⁷. Voluntary allocation and capitalization are extensive in France, but collective capitalization is not widespread. However, it brilliantly finances most of the pensions in some public institutions (Bank of France, Senate...). It has also been successfully reintroduced according to a complementary logic in the public service (ERAFP), pharmacists (CAVP) or well performing and responsible companies (collective or mandatory PER). Unfortunately, most employees do not have access to it. In France, capitalization remains "disorganized"⁸⁸ with a minority of workers having access to more efficient pension schemes, which generates inequalities and misalignments of interests within the private sector or between employees and civil servants⁸⁹.

Some argue that it is impossible or too late to ramp up collective capitalizations in France. However, the examples of civil servants (ERAFP) and pharmacists (CAVP) show that it is possible to increase collective capitalization, without further destabilizing the distribution handicapped by unfavourable demographics⁹⁰.



Pension proposals for purchasing power

1. Set up collective capitalization for all private sector employees, on the model of what has existed in the public sector since 2005 with the ERAFP.

Each private sector employee will have a personal account, funded monthly by employer (1% of gross salary) and employee (1% of gross salary) contributions.

These sums will be paid to an additional retirement establishment for private sector employees (ERASP). Copied on the model of The Establishment for Additional Retirement of the Public Service (ERAFP), it will be hosted by Agirc-Arrco, which will allow it to benefit from the advantages of parity governance within a pension fund with strong legitimacy.

This reform will be carried out according to a principle of "neutrality for the pay slip". The creation of ERASP will be done concomitantly with the reduction of taxes on the pay slip that do not create rights (CSG-CRDS, etc.) to avoid any deterioration in competitiveness or purchasing power.

2. Making pay-as-you-go or tax-financed pensions more reliable

Start provisioning the pensions of new civil servants within the FRR, in order to save public money as the Bank of France or the Senate do.

Reform the CNAV so that it has reserves to cushion shocks, as it exists in all well-managed pay-as-you-go schemes in France or abroad (Sweden).

Put an end to the process of placing under supervision well-managed private funds (Agirc-Arrco...) that have no reason to have their contributions managed or their reserves divested.

3. Improving the retirement savings component of the PACTE law

Abolish the social lump sum on all payments made by companies in PACTE products, to increase the amounts credited to savers' accounts.

Neutralize the calculation of capital gains on all retirement or long-term savings products, to avoid calculating (fictitious) capital gains on inflation.

Improve the taxation of capital outflows, by reversing all the deterioration made as part of the harmonization process between products existing before the PACTE law.



Zoom 4: A consensus that the distribution is less efficient

Georges Gallais-Hamonno and Pedro Arbulu showed in 1995 that capitalization was attractive in the second half of the 20th century in France⁹¹. The results are similar in Germany⁹² and in all OECD countries.⁹³

Closer to home, Bouhakkou, Coën and Folus attest to a 5-point differential between equity market returns and the distribution between 1977 and 2016, with a ratio of 3 to 1. The French Autorité des marchés financiers also points out that equity market returns are significant. According to it, they exceed by 2 to 3 times the average growth in the major developed countries⁹⁴. Similarly, in a 2020 note, Natixis' economic research team showed that the average return on the allocation was around 1.8% per year from 1982 to 2019 compared to 8.8% net of inflation for a capitalization invested equally between equities and bonds⁹⁵.

The benefit of allocation vis-à-vis capitalization could last. In 1997, Olivier Davanne and Thierry Pujol expected long-term growth of around 2%, compared to 4 to 6% for a "reasonable" estimate of the long-term return on diversified capital.⁹⁶ They pointed to the implicit taxation represented by the almost exclusive use of distribution in France. Their point of view was shared by Jean-Hervé Lorenzi, according to whom "to have the same level of benefits at a given time, funded retirement is less expensive, all other things being equal, since it is more profitable and therefore requires a lower level of initial 'committment'¹⁹⁷. We find the same perception in Didier Blanchet, according to which the data lean "in favour of capitalization if the return on capital is higher than the growth rate (r > g)".⁹⁸

More recently, in a best-selling 2013 book, Thomas Piketty provides forward-looking elements along the same lines. According to him, the rate of return on capital (r) would be historically stable and higher than growth (g). For the economist, "everything suggests that the average rate of return on capital will be well above the rate of economic growth during the twenty-first century (about 4%-4.5% for the first, barely 1.5% for the second)".⁹⁹

Zoom 5: A consensus on diversifying pension funding to reduce risks

The idea that a combination of pay-as-you-go and capitalization systems can be optimal due to diversification was initiated by Robert Merton in 1983. An advocate of the pay-as-you-go system, he explains that it would be a mistake to do without it, even when it has a low "implicit" return. It helps to cover other risks that individuals may face during their lives. It allows one generation to benefit from the human capital of the next generation.¹⁰⁰

Merton's approach has resulted in a significant production of articles over thirty years. His model, based on portfolio theory, explains why diversification between allocation and capitalization is optimal. It was enriched with Zvi Bodie and Paul Samuelson in 1992¹⁰¹, then extended to inflationary risk with Willem Heeringa in 2008.¹⁰² The consensus, summarized by Pierre Devolder and Roberta Melis, is that "funded and pay-as-you-go pension plans may look very different but are in fact complementary because they deal with different risks." ¹⁰³

We find the same approach in Didier Folus, who considers that "the risk factors that affect the performance of a pay-as-you-go plan or a funded plan, do not act a priori simultaneously on both mechanisms"¹⁰⁴. In a recent study with Léa Bouhakkou and Alain Coën, he concludes that "in most cases, a mixture of the two systems is desirable"¹⁰⁵.



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8. NOTES

¹ Marques, N., Philippe, C. et Rogers, J. (2022). *La pression sociale et fiscale réelle du salarié moyen au sein de l'UE en 2022* (p. 44). Paris-Bruxelles : Institut économique Molinari. Retrieved from <u>https://www.institutmolinari.org/wp-content/uploads/2022/07/etude-fardeau-fiscal-eu-2022.pdf</u>

² INSEE, series 2.201 Actual final consumption of households by function at current prices, calculations on household final consumption expenditure, excluding individual consumption expenditure of governments or non-profit institutions serving households.

³ Abbé Pierre Foundation. (2018). *12th report on the state of poor housing in France 2007*. Paris. Retrieved from <u>https://www.fondation-abbe-pierre.fr/nos-publications/etat-du-mal-logement/les-rapports-annuels/12e-rapport-sur-letat-du-mal-logement-en-france-2007</u> and Abbé Pierre Foundation. (2022). *27th report on the state of poor housing in France 2022* / *Abbé Pierre Foundation*. Paris. Retrieved from <u>https://www.fondation-abbe-pierre.fr/sites/default/files/reml2022_web.pdf</u>

⁴ Trannoy, A. and Wasmer, E. (2013). *How to moderate real estate prices?* ([Note from the Council of Economic Analysis]) (p. 12). Paris: Council of Economic Analysis. Retrieved from <u>https://www.cae-eco.fr/Comment-moderer-les-prix-de-l-immobilier</u>

⁵ Compared to the EU average, the additional cost associated with housing in France is 2.6 % of household income and 9 % of housing expenditure (inc. water, heating) in 2021. It represents 33 billion euros at national level or 1,100 euros per household. Calculations by Institut économique Molinari from Eurostat, Household consumption expenditure by consumption function [TEC00134_custom_3905594], item Housing, water, electricity, gas and other fuels and INSEE, Annual average in thousands of households (30.685 million) and Household consumption by function.

⁶ Housing expenditure includes actual rents and imputed rents (72% of expenses in 2021), maintenance/repair expenses and consumables (water, heating, lighting, etc.). These effort rates are calculated in relation to household final consumption expenditure, excluding individual consumption expenditure of governments or non-profit institutions. household services.

⁷ Housing expenditure includes actual rents and imputed rents (72% of expenses in 2021), maintenance/repair expenses and consumables (water, heating, lighting, etc.). These effort rates are calculated in relation to household final consumption expenditure, excluding individual consumption expenditure of governments or non-profit institutions. household services.

⁸ General Inspectorate of the Environment and Sustainable Development, real estate prices, long-term developments, Jacques Friggit <u>https://www.igedd.developpement-durable.gouv.fr/prix-immobilier-evolution-a-long-terme-a1048.html.</u> Data source: <u>https://www.data.gouv.fr/fr/datasets/r/fc49934a-9d09-4f0b-b26c-a04054468004</u>

⁹ In order to facilitate subsequent interstate and inter-country comparisons, we defined an index of changes in the wealth-adjusted house price (GDP) produced by each inhabitant of the territory concerned, subsequently called PL/PPH.

¹⁰ Joseph Comby, "le logement malade du foncier", Fonciers en débat, 2015 <u>https://fonciers-en-debat.com/le-logement-malade-du-foncier/</u>

¹¹ This increase concerned only residential land and not agricultural land, the total value of which decreased.

¹² Cavailhès, J. (2022, May 28). The value of land and real estate assets in household wealth. *Land under debate*. Retrieved from <u>https://fonciers-en-debat.com/la-valeur-des-terrains-et-des-actifs-immobiliers-dans-le-patrimoine-des-menages/</u>

¹³ Each type of land law affects about 50% of the U.S. population.

¹⁴ Proponents of restrictive land law frequently implement it under the term "smart growth".

¹⁵ The community can limit these rights for reasons of collective harmony, but this limitation can only take place under strong democratic constraint and subject to fair compensation for the loss of enjoyment of the property involved.



¹⁶ Glaeser, E. L. and Gyourko, J. (2002, March). The Impact of Zoning on Housing Affordability [Working Paper]. National Bureau of Economic Research. doi:<u>10.3386/w8835</u>

¹⁷ Demographia. (2020). *16th Annual Demographia International Housing Affordability. Survey: 2020. Rating Middle-Income Housing Affordability* (p. 64). Performance urban planing. Retrieved from http://www.demographia.com/dhi2020.pdf

¹⁸ Knowing that housing built in Texas metropolises is larger than in California.

¹⁹ Zhou, L., Shen, G., Wu, Y., Brown, R., Chen, T. et Wang, C. (2018). Urban Form, Growth, and Accessibility in Space and Time: Anatomy of Land Use at the Parcel-Level in a Small to Medium-Sized American City. *Sustainability*, *10*(12), 4572. two:<u>10.3390/su10124572</u>

²⁰ Cox, W. (2008). *How Smart Growth Exacerbated the International Financial Crisis*. Washington : Heritage Foundation. Retrieved from <u>https://www.heritage.org/international-economies/report/how-smart-growth-exacerbated-the-international-financial-crisis</u>

²¹ Krugman, P. (2005, 8 août). That Hissing Sound. *The New York Times*. Retrieved from <u>https://www.nytimes.com/2005/08/08/opinion/that-hissing-sound.html</u>

²² Hsieh, C.-T. and Moretti, E. (2015, 1 mai). Why Do Cities Matter? Local Growth and Aggregate Growth [SSRN Scholarly Paper]. Rochester, NY. doi:<u>10.2139/ssrn.2693282</u>

²³ Hsieh, C.-T. and Moretti, E. (2019). Housing Constraints and Spatial Misallocation. *American Economic Journal: Macroeconomics*, *11*(2), 1-39. doi:<u>10.1257/mac.20170388</u>

²⁴ Charmes, E. (2013). L'artificialisation est-elle vraiment un problème quantitatif ? *Etudes foncières*, (162), 23.

²⁵ European Commission. (2021). VAT rates applied in the Member States of the European Union, Situation at 1st January 2021, Taxud.c.1(2021), page 54 (p. 135). Retrieved from <u>https://taxationcustoms.ec.europa.eu/system/files/2021-06/vat rates en.pdf</u>

²⁶ Eurostat, Questionnaire NTL - Detailed list of taxes and social contributions according to national classification https://ec.europa.eu/eurostat/statistics-explained/images/c/c5/National_tax_lists_2022-10-31.xlsx

²⁷ In this work, it was assumed that households bear 75% of the tax on products through prices. A significant number of studies consider that the rate of transmission of VAT to prices is around 70% to 80% (Carare & Danninger, 2008; Gautier & Lalliard, 2013). See for example André, M. et Biotteau, A.-L. (2021). Medium-Term Effects of a Rise in VAT on Standard of Living and Inequality: A Microsimulation Approach. *Economic et Statistique / Economics and Statistics*, (522-523), 5-21. DOI:10.24187/ECOSTAT.2021.522D.2037, page 8. We have retained the middle of the range (75%) for VAT, which gives a result consistent with a VAT representing an effort rate (VAT in relation to gross disposable income) of around 9% for households. We used the same carry-over rate on households (75%) for taxes on products other than VAT. This approach is defensive, these taxes targeting goods with demands that are not very elastic in relation to price due to lifestyles (fuel, tobacco, etc.) or purchase obligations (insurance, etc.).

²⁸ Additional costs calculated from the differences France vs EU or Germany, compared to the weight of taxes on products as a percentage of GDP in French and multiplied by the average burden they represent per household in euros.

²⁹ In 2017, according to INSEE, 74% of employed people who say they travel to work use their car. 16% take public transport, 6% walk and 2% cycle to it. Brutel, C. and Pages, J. (2021). The car remains the majority for commuting, even for short distances. *Insee Première*, (1835). Retrieved from https://www.insee.fr/fr/statistiques/5013868

³⁰ According to INSEE, individual transport represents on average 90% of the transport budget of households living in an area of less than 200,000 inhabitants or outside the attraction of cities, compared to 79% in areas of 700,000 inhabitants or more outside Paris and 63% in the Paris area. The larger the area, the fewer cars households have. Mainaud, T. (2021). In 2017, households spent 11% of their disposable income on cars. *Insee Première*, (1855), 4. Retrieved from <u>https://www.insee.fr/fr/statistiques/5358250</u>



³¹ UFC What to choose. (2019). Flight fuel prices A petition against VAT on taxes, text published on 18/09/2019, <u>https://www.quechoisir.org/action-ufc-que-choisir-envolee-des-prix-des-carburants-une-petition-contre-la-</u> <u>tva-sur-les-taxes-n70715/</u>

³² For a calculation aggregating the overall tax burden, from taxes on products to taxes on profits, see Marques, N. and Philippe, C. (2019). *Taxation on fuels and cigarettes. How the motorist and the smoker were turned into 'cash cows' with 60 billion in taxes* (p. 36). Paris-Brussels: Institut économique Molinari. Retrieved from <u>https://www.institutmolinari.org/wp-content/uploads/2019/10/etude fiscalite carburants cigarettes.pdf</u>

³³ Cost for the average driver of a diesel passenger car: Average journey of 12,447 km with a vehicle consuming 5.9 liters of diesel per 100 km and a tax of € 0.91 per liter = € 672 per year.

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³⁴ In 2020, daily smokers aged 18-75 reported consuming an average of 13 cigarettes (or equivalent) per day, or 237 packs in a full year. The calculation of the annual taxation was made on the basis of € 8.62 of CSD and VAT per pack, a figure which corresponds to the consumption of 50% premium cigarettes (€ 10.5 per pack) and 50% of low-market cigarettes (€ 10 per pack). Average consumption extracted from Public health France. (2021, May 26). Tobacco use among adults in 2020: results of the France Public Health Barometer. *Weekly Epidemiological Bulletin*. Paris. Retrieved from http://beh.santepubliquefrance.fr/beh/2021/8/2021 8 1.html

³⁵ Digit Institut économique Molinari according to Eurostat and EY with an employer cost (full or super gross salary) of € 54,594, social contributions of € 25,474 (including € 16,406 employer and € 9,068 salary) and € 2,348 income tax for a single person without children, which gives € 26,772 net of social contribution sales and income tax. Marques, N., Philippe, C. and Rogers, J. (2022). *The real social and fiscal burden of the average employee in the EU in 2022* (p. 44). Paris-Brussels: Institut économique Molinari. Retrieved from https://www.institutmolinari.org/wp-content/uploads/2022/07/etude-fardeau-fiscal-eu-2022.pdf

³⁶ Kato, J. (2003). *Regressive Taxation and the Welfare State: Path Dependence and Policy Diffusion*. Cambridge : Cambridge University Press. doi:<u>10.1017/CBO9780511510212</u>

³⁷ William Martin, I. et Gabay, N. (2018). Tax policy and tax protest in 20 rich democracies, 1980–2010. *The British Journal of Sociology*, *69*(3), 647-669. two: <u>10.1111/1468-4446.12290</u>

³⁸ According to Eurostat the *Total general government revenue* [TEC00021] accounted for 52.5% of GDP in 2021 compared to 46.8% in 2021, a gap of 5.7 percentage points of GDP.

³⁹ Sauveplane, P. et Simula, L. (2017). *Où va l'impôt sur les sociétés ?* ([Rapport particulier] n° 6). Paris : Conseil des prélèvements obligatoires.

⁴⁰ Morgan, K. J. et Prasad, M. (2009). The Origins of Tax Systems: A French-American Comparison. *American Journal of Sociology*, *114*(5), 1350-1394. doi:<u>10.1086/595948</u>

⁴¹ Tournié, G. (1985). *La politique fiscale sous la Cinquième République : Introduction à l'étude du système fiscal français,*. Toulouse : Privat.

⁴² Asselain, J.-C. (2006). Un siècle d'histoire fiscale de la France : Le mirage de l'impôt progressif sur le revenu. Dans *L'impôt en France aux XIXème et XXème siècles* (p. 67-89). Paris : Ministère de l'Économie, des Finances et de l'Industrie.

⁴³ Atkinson, A. et Stiglitz, J. (1976). The design of tax structure: Direct versus indirect taxation. *Journal of Public Economics*, 6(1-2), 55-75.

⁴⁴ Decoster, A., Loughrey, J., O'Donoghue, C. et Verwerft, D. (2010). How regressive are indirect taxes? A microsimulation analysis for five European countries. *Journal of Policy Analysis and Management*, *29*(2), 326-350. doi:<u>10.1002/pam.20494</u>



⁴⁵ Ruiz, N. D. et Trannoy, A. (2006). *La fiscalité indirecte en France : mesures des effets comportementaux et redistributifs à l'aide d'un nouveau modèle de micro-simulation* (p. 55). Repéré à https://www.oecd.org/fr/fiscalite/politiques-fiscales/39494142.pdf

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⁴⁷ Wilensky, H. L. (2002). Rich Democracies: Political Economy, Public Policy, and Performance.

⁴⁸ The category other taxes on production (D29 in the ESA nomenclature) includes taxes targeting companies, communities and households, including taxes on built and unbuilt land. On average, companies bear the bulk of this tax (67% in the EU, 69% in France, 71% in Germany), with households and administrations paying the balance.

⁴⁹ Calculations made by the Institut économique Molinari for 2021 on the basis of the weight differential of production taxes net of subsidies (D29-D39) of the market sector (Nace B to N) between France (1.9% of GDP) and the EU (0.4%) or Germany (-0.9%).

Compared to the EU, there was a 78% excess in production taxes in France: (1,9%-0,4%)/1,5%.

Compared to Germany, there was a 145% excess in production taxes in France: (1.9% + 0.9)/1.5%.

In 2021, taxes on production net of subsidies amounted to 48 billion euros in the non-agricultural market sector (Nace B to N), which employed 18.2 million people. For one job, there were on average 2,675 euros in production taxes (48 billion / 18.2 million).

The tax gap on production net of subsidies is 2,080 euros per person in employment compared to the EU (2,675 euros x 78%) and 3,873 euros compared to Germany (2,675 euros x 145%).

These differences were multiplied by 0.87 assuming that an additional 1 euro of production tax reduces the wage bill by 0.87 euro in the long run, resulting in a negative impact on the wage bill of 1,818 euros vs. the EU and 3,382 euros vs. Germany.

The calculation of the purchasing power lost per employed worker was finalized by removing employer contributions (30.1% on average of employer cost), wage contributions (16.6% of employer cost) and income tax (4.3% of employer cost for an average single employee without children) according to our annual study: Marques, N., Philippe, C. and Rogers, J. (2022). *The real social and fiscal burden of the average employee in the EU in 2022* (p. 44). Paris-Brussels: Institut économique Molinari. Retrieved from https://www.institutmolinari.org/wp-content/uploads/2022/07/etude-fardeau-fiscal-eu-2022.pdf

Note that D29-D39 was not available for the market sector in Croatia and Sweden for 2021, which led to exclude these countries in the calculation. For small economies, this does not introduce bias, although Sweden uses production taxes to finance its social security where other countries rely on social contributions (D12).

Eurostat sources used in the calculations: National accounts aggregates by branch (up to NACE A*64) [nama_10_a64], Employment by branch (up to NACE A*64) [nama_10_a64_a] and B1GQ - Gross domestic product at market prices.

⁵⁰ Smith, A. (1176). *The Wealth of Nations* (French translation of 1881), Chapter II.

⁵¹ Smith, A. (1176). *The Wealth of Nations* (French translation of 1881), Chapter VI.

⁵² Say, J.-B. (1840). *Complete Course in Practical Political Economy* (Belgian Library Society). Brussels, for example page 497.

⁵³ Say, J.-B. (1840). *Complete Course in Practical Political Economy* (Belgian Library Society). Brussels, page 507. Complete extract: "The tax that the producer is obliged to pay is part of his production costs; it is a difficulty he encounters on his way, which he only manages to overcome by paying a certain sum. And since he can only continue to produce as long as all his production costs (his labor included) are reimbursed, he must increase the price of his products; and in this way cause at least a large part of the tax to be borne by its consumers".

⁵⁴ See for example Harberger, A. C. (1962). The Incidence of the Corporation Income Tax. *The Journal of Political Economy*, *70*(3), pages 215-240.



⁵⁵ Sauveplane, P. and Simula, L. (2017). *Where does corporate tax go*? ([Special Report] No. 6). Paris: Council of compulsory deductions, page 5.

⁵⁶ See for example Lauré, M. (1956). *Treaty on Fiscal Policy*. Paris: Presses universitaires de France, p.59

⁵⁷ Simula, L. and Trannoy, A. (2009). Impact of corporate tax. *French Journal of Economics*, (3), page 18..

⁵⁸ Harberger, A. C. (1995). The abcs of corporation tax incidence: Insights into the openeconomy case. In Tax Policy and Economic Growth,. In *Policy and Economic Growth* (American Council for Capital Formation., p. 51-73). Washington, D.C.

⁵⁹ Hassett, K. A. et Mathur, A. (2006). *Taxes and Wages* (n° 49800). *AEI Economics Working Papers*. American Enterprise Institute. Retrieved from <u>https://ideas.repec.org/p/aei/rpaper/49800.html</u>

⁶⁰ Felix, R. A. (2007). Passing the Burden: Corporate Tax Incidence in Open Economies. *LIS Working Papers*. Retrieved from <u>https://ideas.repec.org/p/lis/liswps/468.html</u>

⁶¹ Harberger, A. C. (2008). The Incidence of the Corporation Income Tax Revisited. *National Tax Journal, 61*(2), 303-312.

⁶² Arulampalam, W., Devereux, M. and Maffini, G. (2007). *The Direct Incidence of Corporate Income Tax on Wages* ([Working Paper] n° 0707). Oxford University Centre for Business Taxation. Retrieved from https://econpapers.repec.org/paper/btxwpaper/0707.htm

⁶³ Moore, N. and Kasten, T. (2009). Do Wages Rise when Corporate Tax Rates Fall? Difference-in-Difference Analyzes of German Business Tax Reform., 21.

⁶⁴ Arulampalam, W., Devereux, M. et Maffini, G. (2012). The direct incidence of corporate income tax on wages. *European Economic Journal*, *56*(6), 1038-1054.

⁶⁵ Aus dem Moore, N. (2014). Shifting the Burden of Corporate Taxes: Heterogeneity in Direct Wage Incidence ([Ruhr Economic Paper] n° 531). RWI - Leibniz Institute for Economic Research, Ruhr-University Bochum, TU Dortmund University, University of Duisburg-Essen. Retrieved from <u>https://econpapers.repec.org/paper/zbwrwirep/531.htm</u>

⁶⁶ Ljungqvist, A., & Smolyansky, M. (2014). *To Cut or Not to Cut? On the Impact of Corporate Taxes on Employment and Income* (n^o w20753). National Bureau of Economic Research. doi:<u>10.3386/w20753</u>

⁶⁷ Fuest, C., Peichl, A. et Siegloch, S. (2017). *Do Higher Corporate Taxes Reduce Wages? Micro Evidence from Germany* ([Ifo Working Papers] n° 241) (p. 86). Leibniz Institute for Economic Research at the University of Munich. Retrieved from <u>https://www.ifo.de/DocDL/wp-2017-241-fuest-peichl-siegloch-corporate-taxes.pdf</u>

⁶⁸ Bentata, P. and Marques, N. (2021). *Taxes on production, against wages, employment and growth* (p. 58). Paris-Brussels: Institut économique Molinari. Retrieved from <u>https://www.institutmolinari.org/wp-content/uploads/2022/01/etude impots de production novembre2021 fr.pdf</u>

⁶⁹ Malgouyres, C., Mayer, T. and Mazet-Sonilhac, C. (2021). *Who Benefits from State Corporate Tax Cuts? A Local Labor Markets Approach with Heterogeneous Firms: Comment* (n° IZA DP No. 14569) (p. 31). Bonn : IZA Institute of labor economics. Repéré à <u>https://sites.google.com/site/clementmalgouyres/research</u>

⁷⁰ See for example Martin, P., & Trannoy, A. (2019). *Taxes on (or against) production* (n° 53, notes of the Council of Economic Analysis, June 2019) (pp. 1-12). Paris: Council of Economic Analysis. Retrieved from <u>https://www.cae-eco.fr/staticfiles/pdf/cae-note053.pdf</u>

⁷¹ Marques, N., Philippe, C. and Rogers, J. (2022). *The real social and fiscal burden of the average employee in the EU in 2022* (p. 44). Paris-Brussels: Institut économique Molinari. Retrieved from https://www.institutmolinari.org/wp-content/uploads/2022/07/etude-fardeau-fiscal-eu-2022.pdf

⁷² OCDE. (2021). Panorama des pensions 2021 de l'OCDE, comment la France se situe-t-elle ? Retrieved from https://www.oecd.org/fr/france/PAG2021-FRA.pdf

⁷³ See, for example, Trademarks, N. (2022). Pensions, the challenge is to generalize collective capitalization in France -. *Journal of Liberties*, (17). Retrieved from <u>https://journaldeslibertes.fr/article/retraites-lenjeu-est-de-generaliser-la-capitalisation-collective-en-france/</u>



⁷⁴ Directorate of Research, Studies, Evaluation and Statistics. (2022). *Retirees and pensions - 2021 edition*. Paris. Retrieved from <u>https://drees.solidarites-sante.gouv.fr/publications-documents-de-reference/panoramas-de-la-drees/les-retraites-et-les-retraites-edition-0</u>

⁷⁵ <u>https://www.statistiques-recherches.cnav.fr/recueil-statistique-2019.html</u>, Title 2.

⁷⁶ Contrary to popular belief, most of the pension imbalances are linked to the decline in the ratio of contributors per retiree (-66 % since 1956), the increase in life expectancy (+20 % at birth since 1956) playing a lesser role. For the dynamics of life expectancy at retirement see for example Aubert, P. and Rabaté, S. (2015). *Length spent in career and length of life in retirement: what is the sharing of gains in life expectancy?* (n° 474). Paris: INSEE. Retrieved from https://www.insee.fr/fr/statistiques/1377630?sommaire=1377636

⁷⁷ State officials have never integrated the distribution, hence the unsuccessful attempt to create a "universal regime" in 2020. Their pensions are budgeted under an unfunded defined benefit pension scheme. That choice, dating from 1854, was never called into question, even at the Liberation, since civil servants had not joined the general social security scheme. Cnav). With the decline in the birth rate, accentuated by the effects of decentralization, it has become particularly expensive. In 2020, the ratio of contributors per retiree in the state civil service is 0.86 (vs. 1.4 at the CNAV). As a result, the pension contributions of civil servants represent 85 % of gross index-linked salaries, i.e. 3 times more than what is observed for employees with a less degraded demographic. The balancing subsidies needed to balance civil servants' pensions amount to around €33 billion per year. For more information Marques, N. (2022). *Pensions, miscalculations and public deficits. When an official barometer undervalued has been undermining public debate for 20 years* (p. 46). Paris-Brussels: Institut économique Molinari. Retrieved from <u>https://www.institutmolinari.org/wp-content/uploads/2022/09/etude retraites mecomptes deficits publics.pdf</u>

⁷⁸ Paul Samuelson, winner of the 1970 Nobel Prize in Economics, developed a theory of the equivalence between distribution and capitalization. In a 1958 article, the American economist considered the case of an economy where there would be no possibility of accumulating capital, which somehow melted like snow in the sun. Under these conditions, pensions would be financed exclusively on a pay-as-you-go basis. The working population would transfer part of their income to retirees, while hoping that future generations would show the same care, helping them to support themselves once retirement time comes. There would be no investment, therefore no return. However, despite this observation, Samuelson considers that pay-as-you-go pensions provide a return, which he describes as "implicit". More interestingly, this return could be equal to that of capitalization. Samuelson rightly points out that pay-as-you-go pensions can be distributed all the more generous the higher the rate of population growth. Indeed, at unchanged contribution rates, the revenues of a pay-as-you-go plan will be all the greater the more assets there are. Everything happens, in fact, as if the distribution yielded a "biological interest rate" equivalent to the rate of population growth. If we have a dynamic demographic, like that of the baby-boom years, this "rate" of interest is more significant than if, on the contrary, the population is stationary or aging. Another interesting result is that the economist shows that the implicit return of the allocation can, under certain conditions, be equal to that of capitalization. If the population growth rate is equivalent to the return on financial markets, there is equivalence between pay-asyou-go (implicit) and capitalization (explicit) returns. Samuelson, P. (1958). « An Exact Consumption-loan Model of Interest with or without the Social Contrivance of Money » Journal of Political Economy, volume LXVI December n°6 pp. 467-482.

⁷⁹ Institut économique Molinari and CroissancePlus. (2021). *For a pension reform that responds to French challenges - Competitiveness, employment, innovation with capitalization for all* (p. 88). Paris. Retrieved from https://www.institutmolinari.org/wp-content/uploads/2021/09/etude-retraites-croissanceplus-molinari.pdf

⁸⁰ Davanne, O. and Pujol, T. (1997). Economic analysis of pay-as-you-go retirement. *French Journal of Economics*, *12*(1), 33-56. two:<u>10.3406/rfeco.1997.1014</u>, p41

⁸¹ Trainar, P. (2017). Is the creation of pension funds still useful in advanced economies?, *Journal of Financial Economics*, NO. 126 2017/2, pp. 123-142.

⁸² Trainar, P. (2017). Is the creation of pension funds still useful in advanced economies?, *Journal of Financial Economics*, NO. 126 2017/2, page 136.



⁸³ "The lowering of the growth rate to around 1.5 % per year in rich countries – and perhaps eventually in the whole world – reduces the return on distribution by the same amount. Everything suggests that the average rate of return on capital will be over the twenty-first period.Th century well above the rate of economic growth (about 4%-4,5% for the first, just 1.5 % for the second). Piketty, T. (2013). *Capital in the XXITh century*, Threshold, Chapter 13, pp. 751 ff.

⁸⁴ Prospective calculations made by the Institut économique Molinari for a pure pay-as-you-go scheme (as for private sector employees), a pure collective capitalization scheme (as for Banque de France employees) or a mixed scheme (as for pharmacists with the CAVP).

The hypothesis of return is borrowed from Piketty, with a 1.5% growth rate for the economy and a 4.25% rate of return on capital cf. Piketty, T. (2013). Le capital au XXIème siècle, Seuil, chapter 13, pages 751 and following. The distribution replacement rate (74% of average net earnings calculated over a lifetime) for 28% of gross contributions is borrowed from the OECD. (2021). OECD Pension Outlook 2021, where does France stand? Retrieved from https://www.oecd.org/fr/france/PAG2021-FRA.pdf

The progression of wages and contributions is in line with the growth of the economy over the entire contribution period (42 years). For 1 euro contributed in the first year, the employee contributes 1.84 euros in the 42nd year, his or her salary increasing by 84% net of inflation over the period.

The wealth created in the 42nd year represents 78 euros in a pay-as-you-go system (according to an "implicit" return logic), 147 euros in a pure capitalization system (87% more) and 101 euros with a mixed system (29% more).

³⁰ See for example Holzmann, R. (2013). Global pension systems and their reform: Worldwide drivers, trends and challenges. International Social Security Review, 66(2), 1 29. doi:10.1111/issr.12007

³¹ Expression borrowed from Patrick Artus and Florence Legros. Artus, P. and Legros, F. (1999). The choice of the pension system, Economica, page 145. According to them, a dose of "general capitalization" is doubly advantageous. It would prevent conflicts between employees, by democratizing effective financial products beyond those that are informed or come from large companies.

³² Civil servants benefit from defined-benefit pensions. Their pension is linked to their last index salary and is protected from demographic trends and economic hazards. On the other hand, a significant part of the pensions of private sector employees is defined contribution, with well-managed schemes redistributing what they collect (or what they have put in reserve to smooth out one-off shocks). In a context of falling birth rates, private sector employees are mechanically subject to a drop in the replacement rate. On the contrary, public personnel are protected, the imbalances in the pensions of civil servants materializing through the increase in public expenditure and deficits.

³³ See for example Molinari Economic Institute and CroissancePlus. (2021). For a pension reform that meets French challenges - Competitiveness, employment, innovation with capitalization for all (p. 88). Paris. Retrieved from <u>https://www.institutmolinari.org/wp-content/uploads/2021/09/etude-retraites-croissanceplus-</u> <u>molinari.pdf</u>

⁸⁵ The supplementary pension for pharmacists operates in a mixed manner, with a Pay-as-you-Go (PAYG) and a Capitalized Supplementary Plan (CSG). Pay-as-you-go (PAYG) attracts 61% of contributions and distributes 48% of benefits. The Capital Accumulation Plan (CAP) attracts 39% of contributions and distributes 52% of benefits. The return on investment for capitalization is better, as the RCC benefits from the return on invested capital, while distribution (RCR) is penalized by the unfavorable demographics of pharmacists, with 0.9 contributors per beneficiary. CAVP. (2022). Key figures, July 2022 edition (p. 16). Paris: Caisse d'assurance vieillesse des pharmaciens. Retrieved from https://www.cavp.fr/media/documents/Publications/2022/CAVP-2022-CHIFFRES-CLES.pdf

⁸⁶ Calculation by Institut économique Molinari for an average employee with a gross salary of 38,200 euros per year. His pension contributions represent 28% of gross salary, or 10,700 euros per year when employer and employee contributions are added together. In a mixed system, a contribution of 22% of gross salary would be sufficient (8,300 euros), which means a saving of 2,400 euros gross per year. After deducting employee



contributions (24%) and income tax (6% for an average single employee), the savings under the mixed system are 1,700 euros net per year.

⁸⁷ Holzmann, R. (2013). Global pension systems and their reform: Worldwide drivers, trends and challenges. *International Social Security Review*, 66(2), 1-29. doi:<u>10.1111/issr.12007</u>

⁸⁸ Expression used by Patrick Artus and Florence Legros. Artus, P. and Legros, F. (1999). Le choix du système de retraites, Economica, page 145. According to them, a dose of "general capitalization" would prevent conflicts between employees and generations, by democratizing efficient financial products beyond those that are informed or under the control of large companies.

⁸⁹ Civil servants benefit from defined-benefit pensions. Their pension is linked to their last index salary and is protected from demographic trends and economic hazards. On the other hand, a significant part of the pensions of private sector employees is defined contribution, with well-managed schemes redistributing what they collect (or what they have put in reserve to smooth out one-off shocks). In a context of falling birth rates, private sector employees are mechanically subject to a drop in the replacement rate. On the contrary, public personnel are protected, the imbalances in the pensions of civil servants materializing through the increase in public expenditure and deficits.

⁹⁰ See for example Institut économique Molinari et CroissancePlus. (2021). *Pour une réforme des retraites qui réponde aux enjeux français - Compétitivité, emploi, innovation avec la capitalisation pour tous* (p. 88). Paris. <u>https://www.institutmolinari.org/wp-content/uploads/2021/09/etude-retraites-croissanceplus-molinari.pdf</u>

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⁹⁴ Authors' calculations based on Autorité des marchés financiers (2013), "Letter of Economics and Finance", 2013-3, pages 12-20 based on Thomson Reuters; Growth rates calculated by the author from OECD series (constant prices series, constant PPPs).

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⁹⁸ Blanchet, D. (1998). "The distribution-capitalization debate: an inventory", page 93 in Davanne, O. Lorenzi,
 J.H. and Morin, F. (1998). "Retirement and savings", Economic Analysis Council, July 2017.

⁹⁹ "The lowering of the growth rate to around 1.5% per year in the rich countries – and perhaps in the long term in the whole of the planet – reduces the return on distribution by the same amount. Everything leads one to think that the average rate of return on capital will be during the 21st century clearly above the rate of economic growth (about 4%-4.5% for the first, barely 1.5% for the second). Piketty, T. (2013). Capital in the 21st century, Seuil, chapter 13, pages 751 et seq.



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