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TACKLING EUROPE'S COST OF LIVING CRISIS

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About the authors

Vincent Bénard

Vincent Bénard is an engineer who specialises in civil engineering and land-use planning. A graduate of the Ecole Nationale des Travaux Publics d'Etat (ENTPE), he is the author of numerous articles on the economic consequences of public-housing policies.

Stefan Fölster

Stefan Fölster is Managing Director of Better Future Economics — a think-tank based in Stockholm with a focus on innovative reforms. For many years, he was the Chief Economist for the Confederation of Swedish Enterprise and Affiliate Professor in Economics at the Royal Institute of Technology in Stockholm. He has authored many academic articles and books, among which *The Public Wealth of Nations* (Palgrave/Macmillan) was listed among the best books of the year 2015 in the *Economist* and the *Financial Times*. Another example is *Renaissance for Reform*, co-authored with Nima Sanandaj and published by the IEA and Timbro in 2014.

Panagiotis Liargovas

Panagiotis Liargovas is the Jean Monnet Professor in European Integration and Policies at the University of the Peloponnese as well as Head of the Parliamentary Budget Office at the Hellenic Parliament. He received his BA degree from the University of Athens and his MA and PhD in Economics from Clark University, Worcester MA.

He has been a Fulbright Scholar, a Bakalas Foundation Scholar, a Teaching Assistant Scholar (Clark University) and a European Commission Trainee (Brussels). He has taught at many universities including Clark University, Bologna University, and the Universities of Athens, Patras, and Crete. His research agenda is highly interdisciplinary, combining economics, banking and finance, social issues, and management and focuses mainly on two regions: the European Union and Southeast Europe (including Greece).

Matthew Lesh

Matthew Lesh is the Head of Public Policy at the IEA. He has written about the role of the business and the state, barriers to innovation, digital regulation and free speech, political divides, housing, and market environmentalism.

He regularly appears across television and radio, including the *BBC*, *Sky News* and *GB News*, and has been published in the *Daily Telegraph*, *The Times*, *The Spectator*, *The Wall Street Journal*, the *Sydney Morning Herald* and *The Australian*. Matthew is also a Fellow of the Adam Smith Institute and an Adjunct Fellow at the Institute of Public Affairs. He has also worked for Australian politicians, in digital communications, and founded a mobile application development start-up.

Nicolas Marques

Nicolas Marques is the Managing Director of the Institut Économique Molinari. He has a degree in Management (EM Lyon) and a doctorate in Economics (University of Aix Marseille). He taught economics and was in charge of creating savings products in major French banking groups. He publishes columns in *Capital* and *La Tribune*.

Diana Florentina Năsulea

Diana Florentina Năsulea holds a BA in International Relations and European Studies and a MA in the History and Practice of International Relations. She is currently a PhD candidate with the Economics and Economic Policies Department at the Bucharest University of Economic Studies. Her thesis focuses on the development of the sharing economy as a driver of economic growth in Romania and the public policies affecting it. She is the Programs Manager of the Institute for Economic Studies – Europe and a Fellow of The Institute for Research in Economic and Fiscal Issues.

Radu Nechita

Associate Professor Radu Nechita teaches Microeconomics, Globalisation and Development, and European Economic Integration at Babeș-Bolyai University, Cluj-Napoca, Romania (Department of European Studies). His general topics of interest gravitate around the institutional factors of development, with an emphasis on regulations and monetary and fiscal policies.

He promotes economic education in various forms: as a trainer on personal finance and entrepreneurial education, publishing dozens of articles in mass media, and participating in over one hundred TV and radio shows. Since 2003, he has organised the “Friedrich von Hayek Seminar”, an extracurricular weekly series of interactive conferences, open to all students from the Cluj-Napoca area.

Martin Pánek

Martin Pánek is the Director of the Prague-based Liberální Institut, a Czech think tank that endeavours to develop and apply ideas of classical liberalism. Its activities are based on the principles of individual freedom, a government with limited powers, the free market and peace.

Martin studied Economics at the University of Economics in Prague and later worked as an Advisor to Members of the European Parliament for six years. He focuses on the European Union, federalism, tax competition, and freedom of speech.

Cécile Philippe

Cécile Philippe is President of the Institut Économique Molinari. She holds a doctorate in Economics from the University of Paris-Dauphine and founded the IEM in 2004 in Brussels and Paris. She is the author of several essays and publishes columns in *Les Echos* and *Le Point*.

Florian Rösch

Florian Rösch is currently completing his master’s degree in Money and Finance at Johann Wolfgang Goethe University in Frankfurt am Main, Germany, where he also completed his bachelor’s degree in Economics. He has worked as a research assistant at the Institute for Economic and Financial Research (IREF). He won the 2020 essay competition organised by the Prometheus Institute and the Tax Foundation on ‘International Tax Competition – Risk or Opportunity?’ His academic interests include the financial sector and its interface with fiscal and monetary policy.

Constantinos Saravakos
Constantinos Saravakos is Research Coordinator at the Centre for Liberal Studies – Markos Dragoumis (KEFiM) and a PhD candidate of International and European Studies at the University of Macedonia. His main research interests include regulation, political economy (poverty, inequality, and prosperity), and political parties (democracy, populism, and political behaviour). He holds an MSc in Applied Economics and Administration from Panteion University. He has also received a MA in Political Science and Sociology (Hons) and a BSc in Philosophy and History of Science from the University of Athens. He is a member of the Greek Political Science Association and a member of the Economic Chamber of Greece. He is also a V-Dem Institute (University of Gothenburg) expert for Greece and Cyprus.

Carlo Stagnaro
Carlo Stagnaro is the Research and Studies Director at Istituto Bruno Leoni. He was previously the Chief of the Minister's Technical Staff at Italy's Ministry of Economic Development. He holds an MSc in Environmental Engineering from the University of Genoa and a PhD in Economics, Markets, and Institutions from IMT Alti Studi, Lucca. He is also a member of the Academic Advisory Council of the Institute of Economic Affairs and a Fellow of the Italian Observatory on Energy Poverty at the University of Padua's Levi-Cases Centre. He is a member of the editorial board of the journals *Energia* and *Aspenia*. His main research interests include energy economics, competition policy, regulation, and digital markets.

Giacomo Da Ros
Giacomo Da Ros is a Rresearch Intern at Istituto Bruno Leoni. He is pursuing a master's degree in Economic Policy at Sciences Po, studying at the Paris and Hong Kong campuses. His research interests centre around economic policy and macroeconomics, particularly in relation to liberalisation, innovation, and platforms.

Wiktor Wojciechowski
Since 2008, Dr Wojciechowski has served as an Assistant Professor at the Warsaw School of Economics. Professor Wojciechowski teaches courses on Labour Economics, Institutional Economics, Economic Analysis of Labour and Product Market Reforms, and Economic and Institutional Context of the Firm (MBA). Previously, he was the Chief Economist of the Civil Development Forum, a leading free-market think tank in Poland and a Financial Analysis, Estimations Design & Analysis, Quantitative Research Associate at JP Morgan.

Summary

- While the loose European monetary policy and Russia's invasion of Ukraine are major drivers of inflation and the cost-of-living crisis, they are not its only causes. High consumer prices are often the result of government intervention in the economy such as burdensome regulations and over-taxation. This paper highlights how the governments of eight EU member states can alleviate the inflationary pressures faced by their citizens by liberalising domestic regulations and adopting various tax reforms.
- The housing, transportation, energy, and lifestyle sectors are particularly burdened by high taxes and government interventions. Encouraging competition and reducing taxes would provide immediate assistance to tens of millions of struggling households across the EU.
- Energy costs make up a large and increasing proportion of household expenditure across Europe. Germans, and Europeans more broadly, are facing higher energy prices as a result of the mandated shutdown of nuclear plants. A reduction in indirect taxation, and an easing of the regulations imposed on suppliers, would relieve households struggling to afford other expenses after settling energy bills.
- In housing, bold land-use reforms and an overhaul of the planning permission process are needed. Faster permit processing coupled with increasing the availability of land for development will both enable and incentivise developers to boost housing supply in areas with high demand. Increased supply will drive down costs, which will particularly benefit low-income renters.
- Lower transportation costs are another key area that present potential for liberalising reforms. For example, Italians are paying more for transport, particularly long-distance rail, as a result of a lack of competition, as four-fifths of transport companies are publicly owned or controlled.

Governments should focus on eliminating market distortions that stifle innovation, productivity, and competition between different forms of transportation as well as between service providers.

- Indirect taxes in the lifestyle sector increase shelf prices and worsen the distribution of wealth. These sin taxes are charged in addition to VAT, thus leading to high consumer prices, where the products' original prices are often lesser than the taxes charged on them. For example, alcohol taxes in Romania can reach 56% of the shelf price. In effect, these taxes, which are regressive in nature, disproportionately affect low-income earners, unnecessarily raising daily spending.
- Red tape on businesses creates numerous barriers to economic growth and competition, thus raising consumer prices. Taken by themselves, many of these regulatory burdens appear minor; however, collectively they constitute a heavy cost for companies; especially smaller ones. Governments should reduce or remove unnecessary regulatory procedures to incentivise more competition, which will ultimately leads to lower price levels.

Introduction

Inflation has infected Europe – it is spreading like a virus across the continent, lowering living standards, and driving public unrest. Prices are rising significantly faster than wages, resulting in a decrease in real income. But inflation also has broader effects – it erodes savings, makes planning for the future more challenging, and particularly hurts individuals with a lower and/or fixed income. Many are now facing difficult decisions, deciding between food and energy or spiralling into debt.

The immediate drivers of inflation have received significant attention. Loose monetary policy and generous handouts during the Covid-19 pandemic led to increased demand. However, global supply could not keep up with this increased demand due to supply chain disruptions caused by the pandemic and the spiralling cost of energy after the Russian invasion of Ukraine. Central banks have necessarily responded by increasing interest rates to tighten monetary supply – but in the process, they have slowed down economic activity and are pushing economies towards a recession.

The response by politicians to rising inflation has often been lacklustre if not entirely counterproductive. They tend to try to treat the symptoms of inflation rather than the underlying causes. These measures include higher welfare handouts, subsidised energy prices, increasing minimum wages, and even price controls.

These central diktats regarding production or prices will not solve Europe's woes. State transfers to households, either in the form of general welfare payments or energy subsidies, may help some, but they can be expensive for the state and further stimulate inflationary pressures. Price controls, such as those used in the energy sector, are a dangerous development – they discourage investment and may scare away gas shipments into

Europe and subsequently cause costly shortages. Even now, prices are an essential tool to send signals to suppliers and consumers and encourage production.

This does not mean all is hopeless and nothing can be done. On the contrary, as this impressive set of papers demonstrates, government action over time has increased structural costs for households and businesses. From housing and childcare to food, alcohol, and tobacco, the state is a major contributor to higher consumer prices.

The government imposes unnecessarily burdensome regulations and inspections, levies various fees and onerous and paternalistic taxes, and costs expensive staff time spent filling out paperwork. Thus, an effective response by policymakers to inflation can thus be reducing these burdens. This would represent a supply-side approach to increase the productive capacity of the economy and reduce the upward pressure on prices. Unlike welfare payments, it typically does not entail large fiscal costs, and unlike price controls, it does not come with damning side-effects.

A supply-side approach to reducing consumer prices is supported by extensive evidence. Overregulation is well-understood to increase costs for consumers (Coffey, McLaughlin and Peretto, 2020). Consumer prices increase by around 0.5–1% for every 10% increase in business' regulatory burden (Chambers, Collins and Krause, 2017). This has a particularly regressive impact on lower-income households who face higher levels of poverty as a result of regulations (Bailey, Thomas and Anderson, 2018; Chambers, McLaughlin and Stanley, 2019). This is because lower-income households spend a greater proportion of their income on highly regulated goods like housing, childcare, transportation, utilities, and food and alcohol. Overregulation also has other negative impacts – it can reduce economic growth, discourage investment, and hinder innovation (Loayza, Ovíedo and Servén, 2005; Dawson and Seater, 2013; Fullenbaum and Richards, 2020).

The following chapters outline concrete ways in which state interventions have actively added to cost-of-living pressures. This includes various country-specific examples:

- Swedes are facing higher food prices as permitting requirements and excessive inspection fees curtail the establishment of lower-price grocery stores.

- Czech businesses spend hundreds of hours every year filling out state-mandated paperwork. This increases operating costs and consequently prices for consumers.
- Berlin's rent cap led to a drastic fall in the availability of new accommodation, by up to 60 per cent. This also led to an increase in prices for newer housing not included in the cap.
- Germans, and Europeans more broadly, are facing higher energy prices as a result of the mandated shutdown of nuclear plants.
- Italians are paying more for transport, particularly long-distance rail, as a result of a lack of competition, as four-fifths of transport companies are publicly owned or controlled.
- Italians are also paying more for medicine as a result of restrictions on the establishment and operation of private pharmacies.
- Poland's decision to increase pensions, over 500 benefits, and the minimum wage, has contributed to inflationary pressures.
- Romania is even increasing consumption taxes in 2023, despite inflationary pressures on consumers.

While the cases under analysis vary across countries, they together reveal a fascinating broader story and plentiful opportunities for reform.

Some consistent themes emerge across countries. Restrictive land planning policies have prevented housebuilding across Europe, resulting in significantly higher housing costs for households. Consumers are burdened by regressive duties on alcohol, tobacco, and sugary drinks – which are often ineffective in improving public health and disproportionate to the associated social costs.

In 1759, Adam Smith wrote in *The Theory of Moral Sentiments* that:

> 'Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things.'

Today, Europeans find their opulence limited by harsh taxes and intolerable administrative barriers. The chapters in this volume not only identify problems but also provide clear remedies for policymakers to reduce the cost of living for households – to reduce burdensome taxes and cut unnecessary red tape. The current crisis can be used as an opportunity to boost Europe’s prosperity, but only if the potential is grasped.

Chapter 2
France – In search of lost purchasing power

By Cécile Philippe, Vincent Bénard, and Nicolas Marques

- French households are falling victim to inflationary pressures that are fuelled, in part, by high land prices.
- Unleashing the constructability of land by changing the long-standing philosophy guiding land laws will improve household purchasing power.
- Total consumption taxes are higher in France than in any other EU member state, which significantly affects the average consumer's purchasing power.
- The tax on fuels represents between 68 and 97 per cent of the pre-tax price, which puts France among the worst culprits in the over-taxation of fuel.
- Employees in France are penalised by the tax incidence of production taxes, which have a negative impact on their remuneration.
- Improved involvement of local authorities in VAT revenues will make it possible to secure their financing, allowing them to provide better services for regions without needing as much production taxes.
- French pensions are over-dependent on a 'pay-as-you-go' system in the private sector and unfunded in the public sector. Due to a declining birth rate, there are increasingly fewer resources to finance benefits.
- Private pensions, almost exclusively on the pay-as-you-go system, absorb 28 per cent of gross salaries.

- It is still possible to increase collective capitalisation without destabilising the distribution, which is currently handicapped by unfavourable demographics, as shown by the examples of civil servants and pharmacists.
- Proposal for setting up collective capitalisation for all private sector employees, making pay-as-you-go more reliable, and improving the retirement savings component of the PACTE law, in order to ameliorate the pension system in France.

2.1 Introduction

In times of instability, concerns about purchasing power and inflation are particularly important. While it was known that wage growth had become modest in developed countries, this effect was thought to be offset by access to relatively cheap foreign products until the health crisis. The pandemic and the Ukrainian conflict continue to affect commodity flows, particularly energy, and prices have risen for a number of products.

In keeping with the tradition of the Institut Économique Molinari, we have analysed various structural factors that explain the structural tensions surrounding purchasing power. Since 2010, we have published a ranking of European countries according to the social and fiscal pressure on the average employee. The taxes measured include the employer and the employee contributions to the mandatory public and private law schemes (mutual insurance, pension funds, etc.), income tax, and VAT (Marques, Philippe and Rogers 2022). In France, the tax burden on the average employee is 54 per cent (Figure 1). The average employee is particularly well paid, with €54,600 before contributions and taxes, but his work is so taxed that he is left with only €25,000 net.

Regulations increase the burden on employees. Specific taxes or regulations have a greater impact on purchasing power. We measure the extent of this impact to better understand the current tensions in the following sections. Specific regulations increase the price of housing, which is the number one item of household expenditure (section 2). Special taxes increase the price of certain goods, notably fuel and tobacco (section 3). Moreover, high tax burdens on economic activities increase labour costs and undermine wealth creation and wage dynamism (section 4), while the lack of diversification of pensions increases the finance costs, which strains the gross pay of workers and pensioners (section 5). The proposed reforms make it possible to respond to French concerns about their purchasing power by freeing it up without harming the community.

2.2 The excessive cost of housing hurts purchasing power

The challenge
French households are victims of an inflationary spiral fuelled by land prices.

The challenge
Relaxing land laws to improve purchasing power.

2.2.1 Compared to the EU, an annual additional cost of €1,100 for an average French household

Housing prices affect the financial health of the population. Housing's share of average household budgets rose from 11 per cent of the final consumption expenditure in 1959 to 28 per cent in 2021,[1] with this increase weighing more on low-income households (Table 1).

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

	2002	2017	Evolution (%)
First quartile of the 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: The ratio between the sum of expenditure related to the main dwelling and household final consumption expenditure according to INSEE, Household income and wealth, Insee 2016; 2021. 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.

1 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.

Abbé Pierre Fondation reports that each year, the poorest households' living situation in relation to housing worsens (2018; 2022). The number of homeless people has tripled and the number of households in dilapidated housing has doubled since 2006. The economic and social consequences of higher housing prices on society do not stop there. A 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' (Trannoy and Wasmer 2013: 12). This same note highlights that rising house prices are 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 is a global phenomenon, it weighs more heavily on French households (Figure 1). European comparisons show that housing costs 2.6 per cent more in France than the EU average that is, an additional €1,100 per year per household.[2]

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

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

According to Insee, in 1997, the median price of housing in France was €77,100 or €105,900 in 2019 prices. However, the median price observed in 2019 – before the pandemic – was €209,000, almost doubling in current euros. Statistics from the Ministry of Housing[3] show that since the turn of

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2 Compared to the EU average, the additional cost associated with housing in France is 2.6 per cent of household income and 9 per cent of housing expenditure (including water and heating) in 2021. It represents €33 billion at the national level or €1,100 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.

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

the century, prices have risen on average 86 per cent faster than household income; 156 per cent faster in Paris. Analysts note that 1997 marked the beginning of a dramatic decline in mortgage interest rates globally. This made demand solvent, explaining the rise in house prices observed in many countries. However, this is an exception, not the rule – a demand shock is absorbed by an increase in supply in the medium term, barring physical and regulatory constraints – this shock has not led to price increases everywhere.,

In France 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.

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

2.2.3 Land regulations fuel soaring housing prices

Real estate is divided into land and built shares. Observing the evolution of these two components, economists Joseph Comby[4] and Jean Cavailhès[5] note that they have diverged sharply from the end of the 1990s. Between 1998 and 2008, the value of French residential buildings in relation to the GDP increased by 17 per cent, while the value of residential land exploded from 40 per cent to 270 per cent – an increase of 575 per cent[6]. If the interest rate were the only variable controlling house prices, such a divergence would not be possible. Comby and Cavailhès calculate that the share of land values in residential real estate exploded from 15 to 50 per cent between 1997 and 2008 and then stabilised at around 45 per cent. By relating these percentages to the price paid by households for their housing, the price of land has increased sixfold after adjustment for household income. However, land is not physically scarce in France, which is a generally flat country where less than 6 per cent of the territory is urbanised. Therefore, the authors hypothesise that land regulations prevent the supply of residential land from adapting to changes in land demand.

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4 ‘Le logement malade du foncier’, *Fonciers en débat*, January 2015 (https://fonciers-en-debat.com/le-logement-malade-du-foncier/).

5 ‘The value of land and real estate assets in household wealth’, *Fonciers en débat*, May 2022 (https://fonciers-en-debat.com/la-valeur-des-terrains-et-des-actifs-immobiliers-dans-le-patrimoine-des-menages/).

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

The comparison between California and Texas, which are economically and demographically close (15 million inhabitants gained between 1980 and 2020 for each), illustrates how different land law philosophies affect real estate prices. California practically invented the modern restrictive land rights in the early 1970s while Texas banned them in the 1980s. In Texas, it takes between 3.7 and 4.7 years of GDP per capita to buy a home[7] while it takes between 6 and 7 years in California (and even 10 years at the top of the bubble) (Zhou et al. 2018). In Texas, prices were not very sensitive to economic fluctuations, while California suffered the most from the subprime crisis in 2008 (Cox 2008).

The more regulations limit the possibility of mobilising building land, the more prices soar when other cyclical data (demographics, economy, and interest rates) fuel additional demand. As Paul Krugman wrote, '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.'[8] He added that in states where peripheral urban expansion is not constrained, 'a housing bubble simply cannot start'.

2.2.4 French land law is increasingly restrictive and erodes the purchasing power

France has a restrictive land law. The law determines what can and cannot be built. The Local Urban Plan (PLU) must be compatible with constantly changing rules, as not doing so prevents 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 changed with the SRU law of 2000, which was designed to 'fight against urban sprawl' throughout the territory within the framework of Territorial Coherence Schemes (SCOT) and obeyed Malthusian rules for opening the land to construction. The implementation of SCOT between 2001 and 2005, and its impact on the scarcity of building land, coincides with the explosion of real estate prices.

Since the SRU law, all governments have added new legislative layers such as the Grenelle Laws 1 and 2, ALUR, ELAN, etc., which introduce

7 Knowing that housing built in Texas metropolises is larger than in California.
8 'That hissing sound,' *The New York Times*, 8 August 2005 (https://www.nytimes.com/2005/08/08/opinion/that-hissing-sound.html).

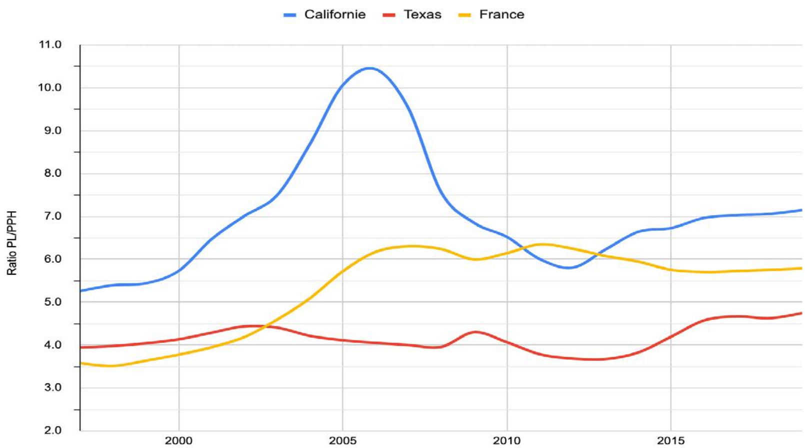
new environmentally justified restrictions. Recently, the Climate and Resilience law of 2021 introduced zero net artificialization (ZAN). The application will limit the possibilities of building. It will be accompanied by high real estate prices, which are harmful to French purchasing power, especially for the poorest households.

Data for the United States shows that the GDP could increase significantly if the most productive areas (New York and Silicon Valley) became more accessible (Hsieh and Moretti 2015). Constraints reduced growth by 36 per cent between 1964 and 2009 due to labour misallocation (Hsieh and Moretti 2019). If the land had been freer, the GDP in 2009 would have been 3.7 per cent higher, with regulations representing a shortfall of $3,685 per person.

2.2.5 Buying a home could be 20 to 40 per cent cheaper in France

To determine the additional cost of housing in France due to different regulations, we compared the evolution of the house price to the GDP per capita ratio in France with that of California and Texas (Figure 1).

Figure 1: Housing price to GDP per capita (PL/PPH) ratio in California, Texas, and France (1997–2019)



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

Until 2002, French prices were in line with those in Texas, with a ratio between 3.5 and 4.5. Since then, prices have been near those in California.

It should be added that French economic and demographic growth has been less dynamic than Texas'. We hypothesise that reactive land regulation would probably have kept French prices at the same level or below those in Texas. If the French ratio had evolved around 4.2 (between 3.7 and 4.7), rather than 6, buying a home could have cost 20 to 40 per cent less. Relating the average price of the transactions to the number (810,000 transactions in 2007; 1,068,000 in 2019), the price difference paid by buyers would have been €61 billion in 2019.

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

Lowering the cost of housing will have 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 per cent 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 or live there. Charmes (2013) estimates €2,400 as the annual additional cost for peri-urban households to travel. While reducing the purchasing power of households, this also increases their greenhouse gas emissions.

2.2.7 Proposed land reforms to improve purchasing power

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

— Reverse the philosophy of PLU by declaring that all serviced land is free to use by default as long as it is serviced, except for limited circumstances in which owners are compensated for the blocking of constructability

— Compensation for the loss of the right of ownership will be through discounts on local taxation or rent payments. This will protect territories to what is strictly necessary.

— Provide that land servicing costs cannot be borne by the community, which will encourage a preference for construction.

— Relax building rules in neighbourhoods without historical character. Remove the brakes on high-rise construction in large cities where there is a substantial market.

2. Creating petition rights for the benefit of owners blocked by the Local Urban Plan

— Any owner who considers the zoning of land as imposing unjustified restrictions can exercise a reasoned petition requesting new zoning. The municipality has three to six months, depending on the size of the land and the petitioner's project, to respond. No response will equal acceptance by the authorities. This will make it possible to release the land without waiting for a revision of the PLU, which is usually very slow.

Chapter written by Vincent Bénard

2.3 Taxes on products harm purchasing power

The finding

French households are victims of an inflationary spiral fuelled by taxes on products, specific taxes, and VAT.

The challenges

Total consumption taxes were higher in France (12.3 per cent of the GDP) than in the EU (11.3 per cent) and Germany (10.1 per cent) in 2021. Taxes on consumption referred to as 'taxes on products' in the European System of Public Accountancy (aggregate D.21), are 'indirect' taxes. They are collected by the companies selling goods or services and are, with some exceptions, economically supported by the final consumer.

The most significant of these taxes is the value added tax (VAT). Its performance is in line with neighbouring countries – France matches the EU average (7.4 per cent of the GDP) and is slightly above Germany (7.2 per cent of the GDP). Created in 1954, the VAT comprises four rates in metropolitan France: 2.1 per cent, 5.5 per cent, 10 per cent, and 20 per cent (European Commission 2021). With a yield of €185 billion in 2021, it is the primary source of financing for the state before the CSG (capitalised supplementary plan) (€129 billion) and all other taxes.[9]

The difference in taxation on products between France and neighbouring countries represents 4.9 per cent of France's GDP. These taxes target specific expenditures worth €123 billion per year. For centuries, France

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9 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

has had ‘sin’ taxes targeting not only consumption (tobacco, gambling, and drinks) but also taxes foresight (insurance), patrimonial operations (transfer taxes on real estate transactions), and negative externalities (fuels and pollution).

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

We estimate that taxes on products amount to €7,400 per household per year, of which €4,400 is VAT and €3,000 represents other taxes[10].

The additional cost for an average French household is €600 per year compared to the EU average and €1,300 compared to Germany.[11] These differences are almost entirely due to other taxes on products, which are particularly large in France.

2.3.2 Stacks of behavioural taxes and VAT

The best-known product-specific taxes 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 per cent.

The TICPE on fuels represents between 68 and 97 per cent of the pre-tax price (depending on whether diesel or super SP 95 are considered), which put France among the leaders of fuel taxation. It is second for diesel, behind Finland, and fifth for unleaded 95.

The DCT on tobacco represents between 414 and 434 per cent of the pre-tax price of a pack of cigarettes, depending on whether one considers it a premium or a budget product.

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10 In this work, it was assumed that households bear 75 per cent 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 per cent to 80 per cent. See André and Biotteau (2021: 8), for example. We have retained the middle of the range (75 per cent) for VAT, which gives a result consistent with a VAT representing an effort rate of around 9 per cent for households (VAT in relation to the gross disposable income). We used the same carry-over rate on households (75 per cent) for taxes on products other than VAT. This approach is defensive, with these taxes targeting goods with demand that is not very elastic in relation to price due to lifestyles (such as fuel, tobacco, etc.) or purchase obligations (insurance, etc.).

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

These specific taxes constitute revenues that are all the more significant for public finances because users are dependent on these products. The car is an indispensable mode of transport for many French people, especially for those who work,[12] not to mention those who live in sparsely populated areas.[13]

Fuel and cigarettes are subject to 20 per cent VAT, as are goods or services taxed at the full rate of VAT. However, they are also subject to VAT on their specific excise duties. VAT is applied to both DCT and TICPE, which is frequently criticised by consumer associations.[14] This represents an additional cost ranging from 14 to 19 per cent of the pre-tax price for fuel and from 83 to 87 per cent for cigarettes. Therefore, the real VAT rates vary from 34 to 39 per cent for fuel and from 103 to 107 per cent for cigarettes.

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 such as production taxes and 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 rent.[15]

2.3.3 On average, a motorist who smokes pays €2,660 in taxes

The cost of fuel taxation is around €610 per year for a car with an average mileage (8,200 kilometres for petrol and 12,400 for diesel) and consumption (6.8 litres per 100 km for a petrol vehicle and 5.9 for a diesel one).[16] It consists of €420 of TICPE, €80 of VAT on TICPE, and €110 of standard VAT on fuel.

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12 According to Insee, in 2017, 74 per cent of employed people who said they travelled to work used their car, 16 per cent took public transport, 6 per cent walked, and 2 per cent cycled (Brutel and Pages 2021).

13 According to Insee, individual transport represents, on average, 90 per cent of the transport budget of the households living in areas with less than 200,000 inhabitants or outside of cities, compared to 79 per cent in areas with 700,000 inhabitants or more (outside Paris) and 63 per cent in the Paris area. The larger the area, the fewer cars households have (Mainaud 2021).

14 'Soaring fuel prices: A petition against VAT on taxes', *Que Choisir,* 18 September 2019 (https://www.quechoisir.org/action-ufc-que-choisir-envolee-des-prix-des-carburants-une-petition-contre-la-tva-sur-les-taxes-n70715/).

15 For a calculation aggregating the overall tax burden from taxes on products to taxes on profits, see Marques and Philippe (2019: 36).

16 Cost for the average driver of a diesel passenger car: average journey of 12,447 km with a vehicle consuming 5.9 litres of diesel per 100 km and a tax of €0.91 per litre = €672 per year. Cost for the average driver of a petrol passenger car: average journey of 8,231 km with a vehicle consuming 6.8 litres of SP 95 per 100 km and a tax of €0.97 per litre = €544 per year. Mileage and average consumption according to Ministry of Ecological Transition and Territorial Cohesion (2022).

The cost of tobacco taxation is €2,050 per year for an average smoker consuming 13 cigarettes a day.[17] It consists of €1,640 of DCT, €330 of VAT on DCT, and €80 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 per year. Smoking costs them 7.6 per cent of their net income and driving a car costs 2.3 per cent for fuel, not to mention the other additional costs associated with owning a car (such as insurance).[18]

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 heavily taxed. These taxes are 'regressive', that is, they hit low-income people relatively harder.

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. In a country where public revenues are almost six percentage points higher than in the European Union,[19] 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.

17 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 per cent premium cigarettes (€10.5 per pack) and 50 per cent of budget cigarettes (€10 per pack). Average consumption was extracted from Pasquereau, A, et al. (2021). (2021).

18 Calculation by 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 (Marque, Philippe and Rogers 2022: 44).

19 According to Eurostat, the total general government revenue [TEC00021] accounted for 52.5 per cent of the GDP in 2021 compared to 46.8 per cent in 2021 – a gap of 5.7 percentage points of the GDP.

2.3.4 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 be a 'value added' tax – not other taxes that do not create any added value.

Chapter written by Cécile Philippe and Nicolas Marques

2.4 The impact of production taxes undermines purchasing power

The finding

Employees in France are penalised 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 unemployment.

2.4.1 Production taxes remain abnormally high in France

Despite the movement to reduce production taxation that began in 2021 as part of France's Recovery Plan, production taxes remain particularly significant. They represented 4.5 per cent of France's GDP in 2021, compared to 2.5 per cent in the EU and 1 per cent in Germany. They were two times higher in France than in the EU, and five times higher than in Germany. When one considers their actual cost (by removing the subsidies), the differences are even greater. Net taxes on production accounted for 1.8 per cent of France's GDP, compared with 0.2 per cent in the EU and -1.6 per cent in Germany. They were nine times higher in France than in the EU, and Germany subsidised its production as much as France taxed its own.

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

2.4.2 The impact of corporate taxation on wages

A significant part of the population believes – wrongly – that they are spared by this taxation, most of which targets companies.[20] The general public assumes that only companies pay taxes that specifically target them (employer social contributions, taxes on profits, etc.) and households only pay the taxes targeting them (employee contributions, income tax, and VAT).Economic analysis shows that reality is much more complex. Households indirectly bear taxes targeting businesses. Indeed, producers pass on taxation to the products in the form of VAT, specific taxes, etc. Their survival is often conditioned on the transfer of the taxes targeted at companies to households. Since the creation of economics, this reality has been identified by its founding fathers. They highlighted the transference of taxes onto consumers and, failing that, onto producers with weak market power (Zoom 2).

This approach was taken up in 1962 by Harberger[21]. 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 showed 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).

20 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 per cent in the EU, 69 per cent in France, and 71 per cent in Germany), with households and administrations paying the balance.

21 Harberger, A. C. (1962). “The Incidence of the Corporation Income Tax”. In The Journal of Political Economy, 70(3), pages 215 240.

2.4.3 Compared to the EU, France levies an annual additional cost of €900 on the average employee

We assessed the effect of excess taxation in French production on the purchasing power of an average employee.[22] In 2021, there were, on average, €2,675 in production taxes per employee in the market sector in France. This level was abnormally high vis-à-vis the EU – an excess of 78 per cent or €2,081 per employee – or Germany – an excess of 145 per cent or €3,873 per employee (see . The negative impact on purchasing power was calculated by considering that an excess of €1 in tax on production reduces the wage bill by €0.87 (ratio obtained from a review of the economic literature, please see Zoom 3). It shows that, compared to the EU, French over-taxation of production taxes penalises an average employee by €900 per year. Vis-à-vis Germany, the impact is even more significant, with a loss of €1,700 in purchasing power per year.

This order of magnitude is representative of 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.

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22 Calculations were 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 per cent of the GDP) and the EU (0.4 per cent) or Germany (-0.9 per cent). Compared to the EU, there was a 78 per cent excess in production taxes in France: (1.9%-0.4%)/1.5%. Compared to Germany, there was a 145 per cent excess in production taxes in France: (1.9% + 0.9)/1.5%.

In 2021, taxes on production net of subsidies amounted to €48 billion 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 in production taxes (48 billion/18.2 million). The tax gap on production net of subsidies is €2,080 per person in employment compared to the EU (€2,675 x 78%) and €3,873 compared to Germany (€2,675 x 145%). These differences were multiplied by 0.87 under the assumption that an additional €1 of production tax reduces the wage bill by €0.87 in the long run, resulting in a negative impact on the wage bill of €1,818 versus the EU and €3,382 versus Germany.

The calculation of the purchasing power lost per employed worker was finalised by removing employer contributions (30.1 per cent on average of employer cost), wage contributions (16.6 per cent of employer cost), and income tax (4.3 per cent of employer cost for an average single employee without children) according to our annual study Marques, Philippe and Rogers (2022: 44). Note that D29-D39 was not available for the market sector in Croatia and Sweden for 2021, which led to the exclusion of these countries from the calculation. For small economies, this does not introduce bias, although Sweden uses production taxes to finance its social security whereas 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.

2.4.4 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 five-year horizon.

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

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

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

Chapter written by Cécile Philippe and Nicolas Marques

2.5 Lack of pension diversification hurts purchasing power

The finding
French pensions, which depend almost exclusively on a pay-as-you-go system in the private sector and are 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 capitalisation for all private sector employees on the model of the ERAFP for civil servants.

For structural reasons 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 boomer counter-shock.

2.5.1 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 Europe in the 2010s, which weighed on wage growth. This phenomenon is, in part, linked to a French particularity: the weight of social contributions. According to our latest annual barometer, social contributions are 102% of salaries net of taxes. This is unique in the European Union, where social security contributions represent on average 52 per cent of wages net of tax (Marques, Philippe and Rogers 2022: 44).

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 less qualitative. More specifically, the weight of social protection expenditure in French GDP (34 per cent) is close to Germany (30 per cent) or Italy and the Netherlands (29 per cent). Per capita social protection expenditure in France (€12,200) is equivalent to that of Germany (€12,600) and lower than in the Netherlands (€13,500); OECD projections show that future replacement rates will be average, despite the size of pension contributions which represent 28 per cent of gross wages.

2.5.2 Private pensions absorb 28 per cent of gross salaries

The additional French cost in terms of social security contributions is above all the consequences of the almost-exclusive financing of pensions by pay-as-you-go. This state of affairs is the consequence of a long process of supervision and, then, the extinguishment of the collective capitalisation 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 capitalisation at the end of World War II.[23] Since then, the situation has never been corrected in France. Despite

23 See Marques (2022), for example.

their advantages, individual or group retirement savings plans (PER) represent only a marginal share. In 2019, funded arrangements accounted for 4.2 per cent of contributions and 2.1 per cent of benefits in France (DREES 2022).

However, the distribution shifts the purchasing power from the active workforce to the retired without creating any new purchasing power. This is problematic for the active population in an aging society. When it was introduced in 1941 and generalised at the Liberation in the private sector, the situation was favourable. In 1956,[24] there were four contributors to the Cnav to finance a pensioner with a small pension, at a time when retirement mobilised only 5 per cent of the GDP.

Today, the situation is radically different. There are almost three times fewer contributors to finance a pensioner (1.4 contributors per pensioner to the Cnav) with a significant pension, for an incidentally longer period,[25] in a country where pensions paid by the pay-as-you-go or the budget absorb about 14 per cent of the GDP.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 reduced purchasing power of employees due to pension contributions representing 28 per cent 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 similar to the private sector. It is destabilising public finances, which have been systematically in deficit since the shock of the baby boom.[26]

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24 https://www.statistiques-recherches.cnav.fr/recueil-statistique-2019.html, Title 2.

25 Contrary to popular belief, most of the pension imbalances are linked to the decline in the ratio of contributors per retiree (-66 per cent since 1956), with the increase in life expectancy (+20 per cent at birth since 1956) playing a lesser role. For the dynamics of life expectancy at retirement see Aubert and Rabaté (2015).

26 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 2020). With the decline in the birth rate, accentuated by the effects of decentralisation, it has become particularly expensive. In 2020, the ratio of contributors per retiree in the state civil service was 0.86 (vs. 1.4 at the Cnav). As a result, the pension contributions of civil servants represent 85 per cent of gross index-linked salaries, that is, three 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, see Marques (2022: 46).

2.5.3 Compared to a mixed system, an average employee experiences a shortfall of €1700

While theoretically the 'implicit' return on allocation may equal that on funding in some circumstances,[27] 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 practised in France causes losses for employees.

Capitalisation – 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 improves the contributions resulting from compulsory levies. From an individual point of view, with the same amount of compulsory contributions, capitalisation generates better pensions than pay-as-you-go. From a macroeconomic perspective, capitalisation makes it possible to save compulsory levies by improving the quality-to-price ratio of public services but also allocates more capital to the financing of the economy (Institut économique Molinari and CroissancePlus 2021: 88).

Therefore, Dutch employees with significant pension funds will have more generous future pensions than those in France (Figure 23). Dutch employees, who contribute 25% of their salary (3 percentage points less than the 28% required in France), should receive a replacement rate of

27 Paul Samuelson, winner of the 1970 Nobel Prize in Economics, developed a theory of the equivalence between distribution and capitalisation (1958). In a 1958 article, the American economist considers 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 capitalisation. Samuelson rightly points out that pay-as-you-go pensions can be distributed more generously the higher the rate of population growth. Indeed, at unchanged contribution rates, the revenues of pay-as-you-go plans will be 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. The economist also shows that the implicit return of the allocation can, under certain conditions, be equal to that of capitalisation. If the population growth rate is equivalent to the return on financial markets, there is equivalence between pay-as-you-go (implicit) and capitalisation (explicit) returns (Samuelson 1958).

89% of their net salary, which is 15 percentage points higher than the rate 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 (1997: 41) point out, by investing in the markets, one could obtain the same pension with half the effort.

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

As Philippe Trainar explains, when it comes to pensions, we need to diversify funding sources (Trainar 2017: 123–42). 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 per cent and 66 per cent respectively for capitalization and distribution in France' (Trainar 2017: 136).

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 *Capital in the Twenty-First Century*, that is, 1.5 per cent for the economy – representative of the distribution – and 4.25 per cent for capitalisation.[28]

For an employee whose salary grows with the growth rate of the economy, a mixed system with a two-third distribution and a one-third capitalisation would allow for equal contributions and the distribution of 29 per cent more pension. The capitalisation component would boost the performance of the ensemble. It would finance 48 per cent of the retirement pension while

28 'The lowering of the growth rate to around 1.5 per cent 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 century well above the rate of economic growth (about 4 per cent–4.5 per cent for the first, just 1.5 per cent for the second)' (Piketty 2013: 751).

representing one-third[29] of the payments, with amounts comparable to that of the supplementary scheme for pharmacists (CAVP), which operates both on a pay-as-you-go and funded basis.[30](hese ratios are comparable to those of the complementary pension plan for pharmacists (CAVP).

Alternatively, a mixed scheme funded by contributions representing 22 per cent of the gross salary could distribute the same pensions as the current one, requiring contributions representing 28 per cent of the gross

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29 Prospective calculations made by the Institut économique Molinari for a pure pay-as-you-go scheme (for private sector employees), a pure collective capitalisation scheme (for Banque de France employees), or a mixed scheme (for pharmacists with the CAVP). The hypothesis of returns, borrowed from Piketty, is based on a 1.5 per cent growth rate for the economy and a 4.25 per cent rate of return on capital (2013: 751). The distribution replacement rate – 74 per cent of average net earnings calculated over a lifetime – for 28 per cent of gross contributions is borrowed from OECD (2021). The progression of wages and contributions is in line with the growth of the economy over the entire contribution period (42 years). For every €1 contributed in the first year, the employee contributes €1.84 in the 42nd year, his or her salary increasing by 84 per cent net of the inflation over the period. The wealth created in the 42nd year represents €78 in a pay-as-you-go system (according to an 'implicit' return logic), €147 in a pure capitalisation system (87 per cent more), and €101 with a mixed system (29 per cent more).

30 See Holzmann (2013), for example.

31 An expression borrowed from Artus and Legros (1999: 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 materialising through the increase in public expenditure and deficits.

33 See Molinari Economic Institute and CroissancePlus (2021: 88), for example.

30 The supplementary pension for pharmacists operates in a mixed manner, with a pay-as-you-go (PAYG) and a capitalized supplementary plan (CSG). PAYG attracts 6 1 per cent of the contributions and distributes 48 per cent of the benefits. The capital accumulation plan (CAP) attracts 39 per cent of the contributions and distributes 52 per cent of the benefits. The return on investment for capitalisation is better, as the RCC benefits from the return on invested capital, while distribution (RCR) is penalised by the unfavourable demographics of pharmacists, with 0.9 contributors per beneficiary (CAVP 2022: 16).

salary. The current situation represents an implicit tax of around 6 per cent of gross salaries, that is, a shortfall of €1,700 net of social contributions.[31]

2.5.4 Generalising collective capitalisation: 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 generalise collective capitalisation to all employees, on the model employed for civil servants with the establishment of additional retirement of the public service (ERAFP).

The standard advice is to organise pensions with three pillars: pay-as-you-go, mandatory collective funding, and optional (Holzmann 2013). Voluntary allocation and capitalisation are extensive in France but collective capitalisation is not widespread. However, it brilliantly finances most of the pensions in some public institutions such as the Bank of France, the Senate, etc. It has also been successfully reintroduced according to a complementary logic in the public service (ERAFP), for pharmacists (CAVP), or in well-performing and responsible companies (collective or mandatory PER). Unfortunately, most employees do not have access to it. In France, capitalisation remains 'disorganized'[32] 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 servants.[33]

31 Calculations by the Institut économique Molinari for an average employee with a gross salary of €38,200 per year. His pension contributions represent 28 per cent of the gross salary or €10,700 per year when employer and employee contributions are added together. In a mixed system, a contribution of 22 per cent of gross salary would be sufficient (€8,300), which means a saving of €2,400 gross per year. After deducting employee contributions (24 per cent) and income tax (6 per cent for an average single employee), the net savings under the mixed system are €1,700 per year.

32 An expression used by Artus and Legros (1999: 145). According to them, a dose of 'general capitalization' would prevent conflicts between employees and generations by democratising efficient financial products beyond those that are informed or under the control of large companies.

33 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 have defined contributions, 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 materialising through the increase in public expenditure and deficits.

Some argue that it is impossible or too late to ramp up collective capitalisations in France. However, the examples of civil servants (ERAFP) and pharmacists (CAVP) show that it is possible to increase collective capitalisation, without further destabilising the distribution handicapped by unfavourable demographics.[34]

2.5.5 Pension proposals for purchasing power

1. Setting up collective capitalisation for all private sector employees with the ERAFP, on the model that has existed in the public sector since 2005.

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

— These sums will be paid to an additional retirement establishment for private sector employees (ERASP). Copying 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 exist in all well-managed pay-as-you-go schemes in France or abroad (for example, Sweden).

— Put an end to the process of placing well-managed private funds under supervision (such as Agirc-Arrco) that do not need to have their contributions managed or their reserves divested.

3. Improving the retirement savings component of the PACTE law

— Abolish the social lumpsum on all payments made by companies in PACTE products to increase the amounts credited to savers’ accounts.

34 See Institut économique Molinari and CroissancePlus (2021), for example.

— Neutralise 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 harmonisation process between products existing before the PACTE law.

Chapter written by Cécile Philippe and Nicolas Marques

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Chapter 3
Price developments in Germany – An analysis of the rising costs of living

By Florian Rösch[35]

- Germany is experiencing record high inflation; in September 2022, the rate was 10.9 per cent. A look at inflation dynamics, however, shows that prices were on the rise even before the energy crisis and the Russia–Ukraine war.
- Inflation affects low-income private households the most. The household-specific inflation rate for low-income couples with two children was 11.8 per cent in October 2022. In contrast, the inflation rate for high-income singles was only 8.4 per cent. The expenditure and the household-specific inflation data clearly show that low-income private households are most affected by price increases.
- Calls for a nationwide rent cap in Berlin ought to be rejected. The rent cap in Berlin led to a 60 per cent decrease in supply of housing since 2020 and could not stop the increase in rent prices. Nationwide rent caps could have similar effects on rent and housing prices. Instead, an increase in the housing supply will likely lead to a long-term decrease in the cost of living.

35 Goethe University Frankfurt, Department of Economics, E-mail: Florian.Roesch@stud.uni-frankfurt.de

- Extending nuclear power beyond 2023 would result in up to 4 per cent lower electricity prices in 2023 and 1.2 per cent lower electricity prices in 2024 (Mier 2022). To ease the cost-of-living crisis in the long term, open competition among different energy sources is needed.
- Taxes on tobacco products have increased significantly in the last 20 years. However, this did not lead to increased tax revenue even though overall tobacco consumption remained the same, because users switched to lesser-taxed tobacco products. Since low-income private households spend as much as 18 per cent of their disposable income on food, beverages, and tobacco, reducing sin taxes would be an adequate way of reducing the inflationary pressure for them.
- Maintain open competition in the transport sector. The temporary gas tax cuts were costly, benefitting only richer private households and distorting the competition in the short term. Other measures, such as the '9-Euro Ticket', were simply an intertemporal transfer of expenditure and did not have a lasting effect on prices. To achieve lower costs of transportation in the long term, maintaining open competition among different vehicles and services is crucial.
- Short-term tax cuts are no means to stop inflation. Individuals use temporary tax cuts to smooth consumption. Measures like the three-month fuel tax cut, while effective, were costly and inefficient. To help poor private households in the ongoing cost-of-living crisis, targeted transfers would be a more efficient means.

3.1 Introduction

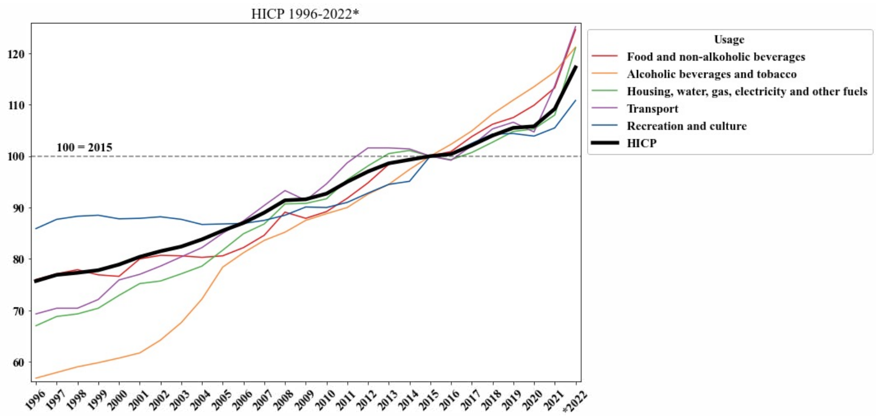
In September 2022, the general price level, as measured by the Harmonised Index of Consumer Prices, increased by 10.9 per cent compared to the previous year. This is the highest value ever recorded for the Federal Republic of Germany (Destatis 2022c). The main reason for these unusually high inflation rates is the energy crisis triggered by the Russia–Ukraine war. The main consequence of price increases is a rise in living costs. However, this rise in living costs has not only been due to the energy crisis. Long-term structural factors have increased prices independent of the effects of the loose monetary policy in recent years. Numerous studies have already looked at the effects of loose monetary policy on a range of variables (Papadamou et al. 2019). However, the focus of this paper is to identify government interventions (apart from monetary policy) that influence prices. European countries often react to rising prices and costs of living by increasing fiscal and regulatory measures. These measures intervene strongly in the price mechanism and are thus a crucial cost driver. Some of these interventions may be justified to internalise externalities, but in many cases, they lead to systematically higher prices without a justified rationale.

This work also shows that low-income private households are more affected by price increases than high-income private households. Intervening in the price mechanism through taxes or regulations can distort or even prevent the most important role of prices in a free society, namely, the efficient allocation of resources. Prices signal scarcity, oversupply, and the quality of products. Government intervention can distort this information, thereby raising prices in the long run and eliminating important incentives for demand and supply adjustments.

3.2 Definition of the harmonised index of consumer prices (HCIP)

The HICP is an index of goods prices, and the German Federal Statistical Office has been calculating it on a monthly basis since 1996 to reflect price changes at the national level. In contrast to the consumer price index (CPI), the harmonised index is adjusted to enable an EU-wide comparison. The HICP serves as a central indicator for macroeconomic price developments for the governments and central banks of the EU countries.

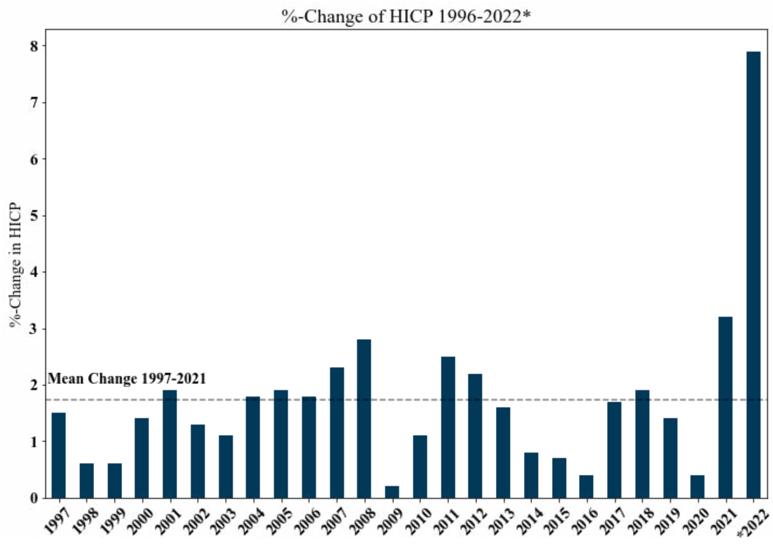
Figure 1: Harmonised index of consumer prices



Source: Eurostat 2022b, Destatis 2022b, own calculation and graph.
*September 2022

The goods basket of the HICP comprises about 650 different goods. These are divided into twelve main categories. The exact goods are determined by sampling and updated every five years. The base year of the index is 2015. Figure 1 shows the development of the HICP since 1996 for a select number of categories, including the largest categories of food and beverages, housing, water, electricity, gas and other fuels, and transport. In 1996, the index value of the HICP was 75.7 points and reached a value of 117.1 points by 2022. This corresponds to a price increase of 54.7 per cent over this entire period. Figure 2 shows the annual changes in the HICP from 1996 to 2022.[1] The exceptionally high increase in 2021 was a result of the supply-side shock from the COVID-19 pandemic. However, it has already exceeded this increase in 2022. The energy crisis triggered by the Russia–Ukraine war caused the index to shoot up in 2022. The dashed line shows the average change in the inflation rate from 1996–2021 and is at the target of just below 2 per cent. The comparison of inflation rates in 2021 and 2022 with the years before demonstrates that current inflation rates are extraordinarily high. Price developments can vary greatly depending on the sector, but the vast majority of categories show a positive increase in prices over time. Since 2015, the inflation rates for categories of food and non-alcoholic beverages, alcoholic beverages and tobacco, housing, water, electricity, gas and other fuels, and transport in particular have risen disproportionately.

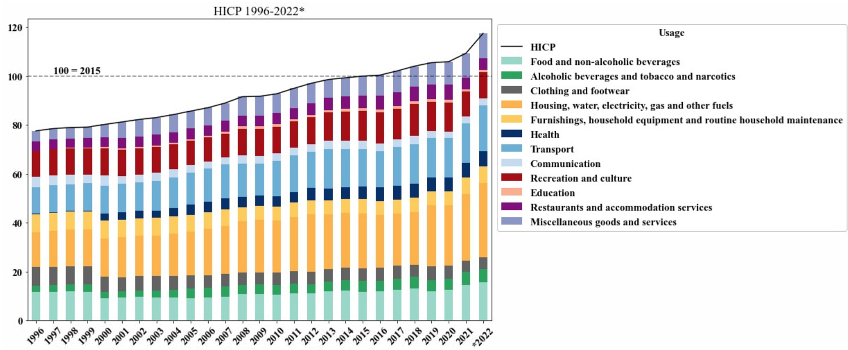
Figure 2: Rates of change of the HICP



Source: Eurostat 2022b, Destatis 2022b, own calculation and graph.
*September 2022

Figure 3 breaks down the price developments into twelve subcategories. The largest categories are housing, water, electricity, gas and other fuels (25.22 per cent); transport (14.94 per cent); and food and non-alcoholic beverages (12.66 per cent). These three categories account for over 50 per cent of the total index. A price increase within these categories thus has a stronger impact on the overall economic price development than an increase in the remaining eight categories. Therefore, I will consider the first three of these four categories in more detail in this paper, together with the category of alcoholic beverages and tobacco.

Figure 3

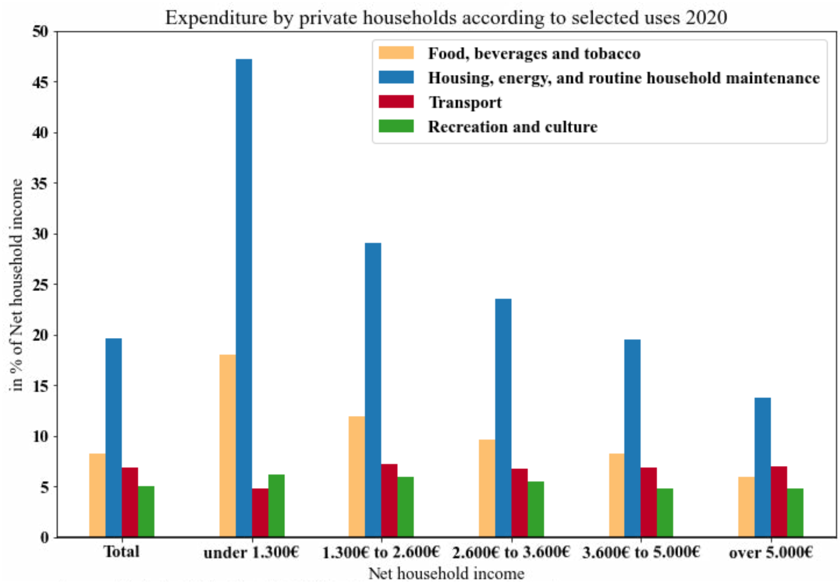


Source: Eurostat 2022a, Eurostat 2022b, Destatis 2022b, own calculation and graph. *September 2022

3.3 Effects of rising prices on private income and expenditure

A change in relative prices has different effects on private households depending on their net household income. I look at private households in five categories based on their household income and then analyse their respective expenditures. In Figure 4, a closer look at how households spend their income reveals notable differences. Private households with an income below €1,300 spend almost half of their gross income on food, beverages, and tobacco products. Together with housing, energy, and housing maintenance, expenditure on essentials adds up to 65 per cent of their gross income. Private households with only slightly higher incomes (between €1,300 and €2,600) spend roughly 29 per cent and 12 per cent on food and beverages and housing respectively. Taken together, this corresponds to 41 per cent of gross income, which is more than 20 per cent less than private households in the lower income distribution category.

Figure 4: Expenditure by private households



Source: Destatis 2020a, Destatis 2020b, own calculation and graph.

The IMK Inflation Monitor for October 2022 calculates the specific inflation rates for the different household categories (Endres and Tober 2022). It shows that private households with low incomes are especially vulnerable to price increases due to the structure of their expenditures. For example, the household-specific inflation rate for low-income couples with two children was 11.8 per cent in October 2022. In contrast, the inflation rate for high-income singles was 8.4 per cent, which is over 3 per cent lower. The biggest differences are in the categories of household energy and food, beverages, and tobacco. For low-income couples with two children, the prices for energy and food, beverages, and tobacco increased by 4 per cent and 3.7 per cent respectively. In comparison, the prices in those categories for high-income singles increased by 2.2 per cent and 1.3 per cent. The expenditure and the household-specific inflation data clearly shows that low-income private households are the most affected by price increases.

3.4 Sector-wise analysis

In the following section, I will take a closer look at four individual sectors. The aim is to work out which government interventions or lack of interventions have led, or will lead, to higher prices. I will examine the housing, energy, lifestyle, and transport sectors in detail.

3.4.1 Housing

Housing is the largest category of the HICP by weight. It is also part of the category 'largest expenditure' of private households, along with energy and housing maintenance. Low-income private households in particular spend almost half of their private consumption expenditure on housing, energy, and housing maintenance (see Appendix, Table 1). This share decreases rapidly with rising income. Consequently, rising housing prices have a significant impact on low- to middle-income private households in particular.

The price index for new or existing residential properties shows an above-average price development since the financial crisis of 2008–2009 compared to the increase in the general price level measured by the HICP. The index indicates the development of purchase prices of detached and semi-detached houses as well as owner-occupied flats purchased by private households (Destatis 2021b). Prior to 2009, there was little to no increase in prices, with the index value for new properties and existing properties changing from 76.3 and 85.8 in 2000 to 77.4 and 83.2 in 2008 respectively. By comparison, the general price level in the same period rose much more sharply from an index value of 78.9 to 91.6. From 2009, however, this trend changed. Thus, while the index values for new and existing properties in 2021 were 140 and 157.5 respectively, the general price level reached a value of just 109.2 in 2021. In contrast to purchase prices, prices for the use of real estate have barely risen. The trend of moderately rising residential rents runs almost parallel to the general price level. This suggests that existing tenants enjoy a high level of protection, and that there are therefore only small changes in existing and newly concluded rental contracts. In addition, since 2008–2009, the demand for property has increased more than the supply. The sharp increase in price indicates an acute shortage.

It is important to note that there are strong regional differences in the housing markets. Supply and demand vary between conurbations and more sparsely populated areas. In addition, supply is inflexible. Houses and flats cannot simply be produced in a factory. However, the capital needed to build them is highly flexible and should flow exactly where the expected return is highest – in this case, to the metropolitan areas. A look at the vacancy rates illustrates strong regional differences. The CBRE-Empirica Vacancy Index 2021 shows the housing vacancy rates in all German federal states as well as in selected cities (empirica – CBRE Group 2021; see Appendix Table 2). A housing market is considered tight when the vacancy rate falls below 2 per cent. There is then either too little supply or too much demand.

Figure 5: Building completions in Germany

Source: Destatis 2021c, own graph.

Most western German states and large cities have a vacancy rate of less than 2 per cent and thus a tight housing market. On the other hand, with the exception of Berlin, all eastern German states have vacancy rates well above 2 per cent. Saxony–Anhalt, Saxony, and Thuringia, for example, have the highest vacancy rates in the whole of Germany – at least 6 per cent. In contrast, the federal states of Bavaria, Baden-Württemberg, and Hesse all have vacancy rates below 2 per cent. The situation is even tighter in large cities. Munich, Berlin, Hamburg, and Frankfurt have vacancy rates below 1 per cent, which indicates an acute housing shortage. Here, too, there is a difference between east and west. Leipzig, for example, has a vacancy rate of 2.7 per cent and is thus in a much better position. Aside from the cities, the vacancy rates of all the new federal states are higher than those of the old ones (see Appendix Table 2). The data shows that there is an acute shortage in large cities in particular. An additional look at actual building completions in recent years indicates that this situation is unlikely to ease soon. As Figure 5 shows, although there was an increase in building completions after 2009, they stagnated after 2017 and even declined from 2020–2021.

Therefore, the crucial questions are: why did the presumed supply response fail to materialise and what obstacles are slowing down residential construction?

One reason for the reluctance to build is the even stronger increase in the price of land. Land is probably the most important limiting factor for residential construction. The price index for land looks very similar to the price index for new buildings. Before 2008–09, this index also stagnated at an index value of around 70; in 2020, by contrast, it was 156.1. Thus, the price for land rose even more strongly than the price for new buildings, suggesting a rapidly increasing scarcity of land.

A detailed nationwide analysis of the various housing markets would exceed the scope of this paper, but I will use the Berlin rent cap as an example to show how not to ease a tight housing market. The rent cap was introduced by the Berlin city government to reduce residential rents and applied from Q1 2020 to Q2 2021. In mid-2021, the Federal Constitutional Court ruled that the Berlin rent cap was unconstitutional. One year after the abolition of the Berlin rent cap, Arlia et al. (2022) investigated its effects both while it was in force and after it was abolished. For this purpose, they used data from a real-estate portal in the corresponding period. To enable an analysis that was not influenced by external factors, they compared Berlin's data with that of 13 other large cities with a population of over 500,000. The study showed that there was a significant dichotomy in the Berlin property market between flats that were subject to regulation and those that were not. Rents and purchase prices of regulated housing segments fell rapidly compared to other major cities and remained at a lower level even after the abolition of the rent cap. Rents in the unregulated segment, on the other hand, increased significantly and continued to be more than 5 per cent higher than in other comparable cities. In addition, the rent cap led to a drastic reduction in supply. The supply of rental flats fell persistently by up to 60 per cent depending on the district, suggesting a lasting effect. Even if the prices of the formerly regulated properties dropped to below average in comparison to other large cities due to the regulation, the permanent supply reduction will lead to increased prices in the long term. The real effects of this regulation will only become apparent over the coming months and years, but there are already many indications that supply will be permanently lower than in other comparable cities.

According to the Ifo Institute, the rapid price increase in the last two years is triggered by the Ukraine crisis. The vast majority of construction companies are experiencing acute material shortages and delays in deliveries. This has led to further increases in construction prices, as replacements can only be purchased at high costs. According to the Ifo Institute, this price development will get even worse, as products that have so far been spared from rising prices will soon also experience price increases. Despite an expected increase in demand, the volume of new construction will tend to decline due to the higher interest rates.

This outlook shows that planning uncertainty is a decisive factor for large, long-term investments in housing construction. Material bottlenecks can be solved in the medium term and thus reduce price pressure, but if government measures cannot be anticipated, there will not be any new construction. Measures like rent caps are also unlikely to permanently ease tight housing markets. Using the Berlin rent cap as an example, I showed how trying to regulate prices can lead to a permanently low housing supply. Reducing supply-side regulations could ease the situation and lead to more housing. Only if land prices fall and housing stocks rise, the price pressure on flats and houses in Germany will decrease. This would relieve the pressure on people with lower incomes in particular. Demand subsidies, such as housing allowances or other direct payments or relief, will not ease inflation, but instead fuel it. Soyres et al. (2022) show that direct relief payments to combat the effects of the COVID-19 crisis increased inflation by 2.5 percentage points in the US and 1.8 percentage points in the euro area. The government payments very quickly brought demand, which had initially collapsed, back to pre-crisis levels. However, stimulating demand cannot solve a supply shortage. Therefore, based on these arguments, one must resist the siren voices claiming that a nationwide rent cap is the answer to the rising cost of living. The example of Berlin demonstrates the drastic 60 per cent drop in available rental housing in response to the rent cap. A nationwide rent cap would likely have similar effects.

3.5 Energy

The energy sector has special significance in the consideration of price increases for two reasons. Firstly, energy is one of the largest components of the HICP and secondly, as a production factor for almost all products, energy indirectly influences the general price level. An increase in energy prices has strong second-round effects on price increase and thus influences the overall price level. As Figure 6 shows, price increases in recent years have been relatively moderate and tended not to exceed the overall price level. In addition, the volatility of the various energy sources differs. Apart from liquid fuels, various energy sources fluctuated only slightly until 2021. However, the current energy crisis is causing the prices of all energy sources to rise. Energy is a highly regulated sector and is additionally affected by excise duties and regulations. Regulation takes place partly at the EU level and to a greater extent at the national level. In addition, the regulation of the energy market can in principle be divided into two categories: regulation with technology openness, such as EU-ETS certificate trading, and regulation without technology openness, such as bans or production standards.

EU-ETS certificate trading, which has existed in the European Union since 2005, was introduced to implement climate protection targets. Trading covers approximately 36 per cent of the greenhouse gases produced in the EU by the energy industry and energy-intensive companies. Certificate trading works according to the 'cap and trade' principle and is a market-oriented and technology-open form of regulation (Perman et al. 2013). At the national level, certificate trading is applied, but apart from this, the regulation of the energy sector has largely moved away from technology-openness. The additional national regulations in Germany have led to further interventions in the energy sector. The interplay between the national expansion of renewable energies and EU certificate trading can lead to coordination problems. The diverging national regulations in the EU, combined with the uniform EU-wide CO_2 limit, has increased costs in the energy sector by up to 13 per cent without leading to additional CO_2 reduction (Anke and Most 2021). From a theoretical perspective, uniform certificate trading is sufficient to achieve environmental targets. But in practical terms, a complete abandonment of additional national targets could lead to a situation where the necessary long-term investments are not made, and the CO_2 target simply cannot be met. A better integration of national targets is therefore absolutely necessary to reduce costs (Fürsch et al. 2010).

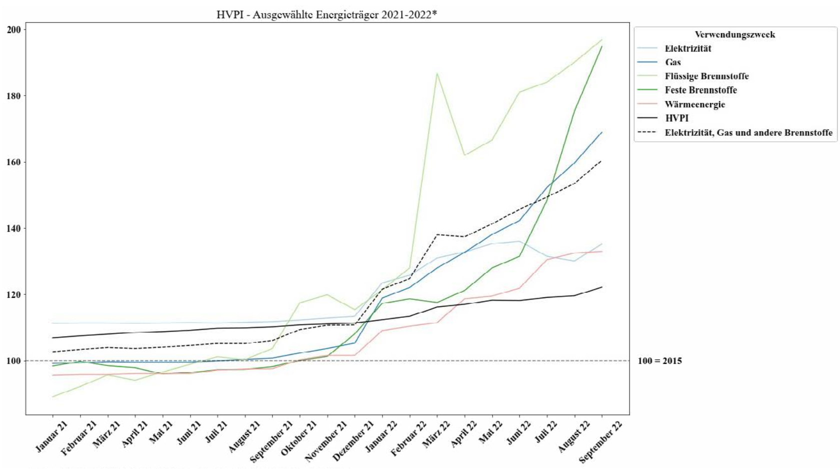
Probably the most important interventions of German energy policy (besides the expansion of renewable energies) are the phase-outs of nuclear and coal energy and the general ban on fracking since 2016. In 2021, Germany produced just under 40 per cent of its electricity through renewables and almost 56 per cent of its energy through conventional means, such as coal (28.1 per cent), oil (0.8 per cent), natural gas (15.2 per cent) or nuclear energy (11.8 per cent) (Destatis 2021a). A departure from these technologies without the necessary expansion of alternatives has a massive impact on electricity and energy prices.

The nuclear phase-out was decided in Germany in 2011. It stated that all nuclear power plants still in operation were to be shut down no later than December 2022 (BASE 2022). However, after the outbreak of the Russia–Ukraine war, there were more discussions about extending the use of nuclear power in Germany. In mid-October, the German government decided that the three remaining nuclear power plants should continue to run until April 2023 in order to guarantee Germany's energy security (Federal Government 2022b). A study by the Ifo Institute shows that a lifetime extension would not only have an impact on German electricity prices, but on European energy prices as well. For Germany, an extension of nuclear power beyond 2023 would result in up to 4 per cent lower electricity prices in 2023 and 1.2 per cent lower electricity prices in 2024. In Europe, the electricity price could be 1.6 per cent lower in 2023 and 0.5 per cent lower in 2024. At the same time, CO_2 emissions would be reduced and gas saved (Mier 2022). The premature phase-out of nuclear power is a fragmented national response by Germany. Since even the EU taxonomy classifies nuclear power as 'green' (European Commission 2022) and considers it a necessary transition technology to renewable energies, the nuclear phase-out is a long-term price driver for the price of electricity in Germany. The coal phase-out was decided in 2020 and states that Germany is to stop producing electricity from coal by 2038 at the latest, but preferably as early as 2035.

Additional regulation prohibits the extraction of natural gas through fracking. On 11 February 2017, the German government enacted a regulatory package that virtually banned fracking in Germany; it remains in force today (BMWK 2022). At the same time, the then federal government set up a commission of experts to publish a final report by 2021 on fracking as a method of extracting natural gas. The commission carried out three studies to analyse the state of natural gas extraction, assess the risks, and propose measures to be taken into account in the possible use of fracking. The study showed that 'the environmental risks due to fracking of unconventional deposits can be minimised by adapted control and monitoring of the measures' (ExpKom 2021: 3). The potential of fracking varies according to estimates. Germany, for example, has between 350 billion m^3 and 2000 billion m^3 of shale gas. Taking into account its average gas consumption of approximately 84 billion m^3 per year during 2001–2021, Germany could be completely self-sufficient in its gas supply for 4–24 years (BP 2022; BGR 2016). Even if fracking could reduce further price pressure on gas and energy in the medium to long term, this is not currently expected to happen. The planned phase-out of conventional power generation measures and the ban on new extraction technologies, such as fracking, represent significant price pressure on the energy market. A further increase in electricity prices, especially after the external shock from the Russia–Ukraine war, is therefore not unlikely in the medium term.

The second major intervention in the energy prices is via taxes. First, each energy product is subject to statutory VAT of 19 per cent on the net amount. In addition, there is a consumption tax in the form of an energy tax. This results in a tax revenue of over €37 billion, which corresponds to almost 4.4 per cent of Germany's total tax revenue. It thus has considerable financial significance as the largest consumption tax in Germany. The specific tax level itself depends on the energy product. For example, unleaded petrol is taxed at €0.65 per litre, whereas natural gas is taxed at €31.80 per MWh. With regard to natural gases or liquefied gases for fuel use, the tax will be successively increased until the end of 2026 (General Customs Directorate 2022b; Federal Ministry of Finance 2022; Destatis 2022d).

Figure 7: HICP selected energy sources 2021–2022



Source: Eurostat 2022b, Destatis 2022b, own calculation and graph.
*September 2022

The second major consumption tax affecting the energy sector is electricity tax. It results in tax revenue of €6.7 billion, which corresponds to 0.8 per cent of the total tax revenue, and thus represents the third-largest consumption tax in Germany. This tax is equivalent to €20.50 per MWh (General Customs Directorate 2022c; Destatis 2022d; Federal Ministry of Finance 2022). Assuming an average consumption of 3,000 kWh per year, this corresponds to €61.50 per year in electricity tax.

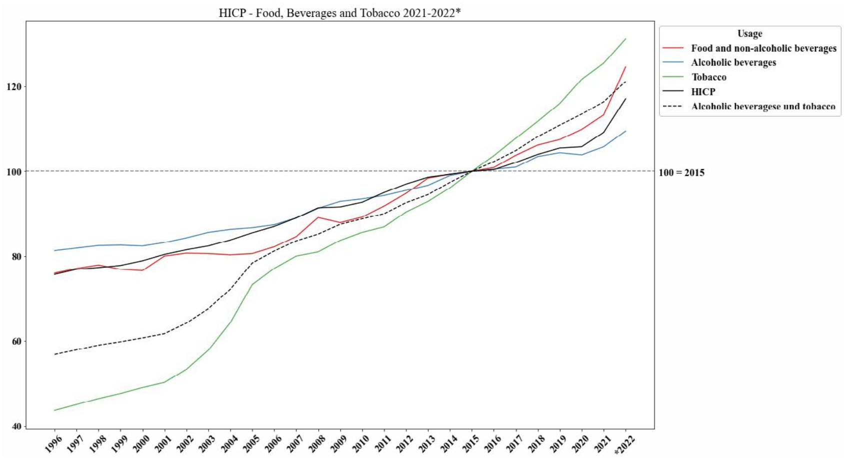
A one-time state intervention to reduce prices in the energy sector was the fuel tax cut introduced in June 2022. It was implemented for three months and reduced the energy tax on petrol, diesel, natural gas, and liquid gas to the minimum level permitted in Europe. Figure 7 shows the development of the previously shown energy sources for the current year. The tax reduction seems to have had little to no effect on the price increases for gas. Moreover, it is questionable whether temporary tax reductions on certain products have any lasting impact on inflation at all. If the income freed up by the tax reduction is used directly for other consumption, we cannot assume that temporary tax reductions can sustainably lower the general inflationary pressure. A large reduction in excise taxes could lower prices in the energy sector. However, such measures should not be introduced as a stimulus measure, as this would undermine otherwise necessary incentives for demand reduction due to shortages.

The extensive state intervention through regulations and taxes in the energy sector will lead to higher prices in the future. Shutting down conventional energy sources and high consumption taxes is unlikely to lead to a large-scale expansion of the energy supply in Germany. The politically desired development of solar and wind energy can only be successful if it prevails in a market-oriented and open competition with other energy sources. Whether this leads to socially acceptable prices is another question. In the end, if politicians continue to actively limit the choice of possible energy sources, consumers will have to accept higher prices in the energy sector and thus higher prices in general. Only an open market process will provide the most efficient and cost-effective solution to a shortage in the electricity market in the long term.

3.6 Lifestyle

Food and beverages are the second largest baskets in the HICP. Together with alcohol and tobacco, both baskets account for a share of slightly more than 17 per cent. Also, in private consumption expenditure, the category of food, beverages, tobacco, and similar goods (8.2 per cent) occupies the second largest expenditure position across all private households, with large variations for low-income households (18 per cent) and high-income households (6 per cent).

Figure 8: Food, beverages, and tobacco



Source: Eurostat 2022b, Destatis 2022b, own calculation and graph.
*September 2022

Figure 8 shows the development of the price for food and beverages as well as for tobacco and alcohol from 1996 until September 2022. Over this entire period, the prices for food and non-alcoholic beverages have risen in a manner similar to the overall price level. The second component of the category, alcoholic beverages and tobacco products – which I group under the lifestyle category – can also be subdivided. On the one hand, the price of tobacco products has increased much faster than all other components, from the index value of 43.6 in 1996 to the current value of 131.2. This corresponds to more than a tripling of the price. On the other hand, the price of alcoholic beverages increased less than the overall price level.

Alcohol and tobacco are heavily regulated and taxed with the aim of promoting health in Germany. Laws against smoking aim to protect non-smokers against passive smoking and therefore represent an important regulation to protect uninvolved third parties from negative externalities.

In addition to the regulations mentioned so far, tobacco is highly taxed. The tobacco tax in Germany exceeds the minimum taxation of the EU and depends on the particular tobacco product. Thus, cigarettes, cigars/cigarillos, fine cut, pipe tobacco, heater tobacco, shisha tobacco, and substitutes for tobacco products are each subject to different tax rates. For almost all products, a gradual increase is already planned until 2027, following several increases in tobacco tax since 2002. A special feature of these sin taxes is that both the quantity and the price of the sin product are used to calculate the tax. This can result in different tax rates for varying product sizes (General Customs Directorate 2022d). A pack of 20 cigarettes sold at €7 includes €3.56 in tobacco tax. In addition, VAT must be taken into account, which results in almost two-thirds of the price of a pack of cigarettes representing taxes. With a revenue of €14.7 billion in 2021, tobacco tax is the second largest consumption tax. This corresponds to about 1.76 per cent of the total tax revenue. Moreover, this revenue has remained almost constant over the last decade (Federal Ministry of Finance 2022; Destatis 2021c). However, total tobacco consumption has hardly changed. There has been no noticeable tax response (Destatis 2022a), suggesting that tobacco consumers are switching to less heavily taxed alternatives and that overall tobacco demand is inelastic. Tobacco taxation as a means of promoting health measures, therefore, seems ineffective. Heavy taxation can be justified as preventive action against first-time users. But here we must question whether targeted regulation in the form of education might not be a better approach.

In conclusion, we can say that the high price taxes on tobacco products are mainly due to the continuous tax increases and will therefore continue to rise disproportionately, as before. As I already stated, it is questionable whether the high sin taxes on tobacco achieve the desired goal. Especially when considering the additional regulation to decrease tobacco consumption, the taxes seem to have more of a fiscal than a health reason.

The consumption of alcoholic beverages is rather more weakly regulated in Germany than in other European countries. Alcohol may be consumed at any time of day and in public places. The restrictions on the protection of minors are also much weaker than in other countries. Beer, wine, and sparkling wine may be purchased and consumed from the age of 16. All other alcoholic beverages or products may only be purchased and consumed at the age of 18. Apart from legal measures for the protection of minors, goods containing alcohol can be consumed in Germany without major regulation.

The taxation of alcohol is also not decisively high. Moreover, there are no planned tax increases, unlike in the case of tobacco products. First, there is a general alcohol tax, which amounts to €1,303 per hectoliter of pure alcohol. In total, there are three other sin taxes on beer, sparkling wine and intermediate products, and alcopops. The amount of tax varies. For example, 12ct of beer tax is due for a litre of strong beer, and 10ct for a liter of wheat beer. For a 0.75-litre bottle of sparkling wine, the tax is €1.02. These taxes seem quite low for the individual bottles, but they do not include the additional alcohol tax and VAT. Furthermore, the tax revenue of these excise taxes for 2021 cannot be compared with those on tobacco or energy. The alcohol tax has the largest tax revenue of €2.1 billion, followed by the beer tax (€600 million), sparkling wine and intermediate products tax (€360 million), and finally, the smallest excise tax, the alcopop tax (just €2 million in tax revenue). Together, all excise taxes on alcohol amounted to €3.062 billion in 2021, which corresponded to 0.37 per cent of the total tax revenue (Federal Ministry of Finance 2022; General Customs Directorate 2022a).

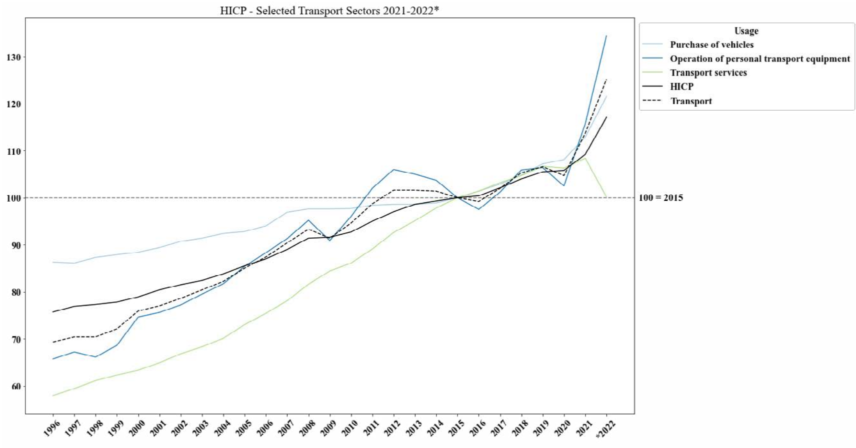
Thus, compared to tobacco, alcohol is taxed and regulated at much lower levels.

The food, beverage, and lifestyle categories show different price trends. With a few exceptions, the price increases in these sectors are very close to the general price level. The rising prices of tobacco products are largely due to rising taxes. This trend will continue in the face of further tax increases in the coming years. However, it remains to be determined whether tobacco consumption will reduce as a result.

3.7 Transport

Lastly, I take a closer look at the transport sector. At 15 per cent, this sector has the third-largest share in the HICP; and at just under 12.9 per cent, it is also the third-largest expenditure category across all private consumption expenditure. With a share of 5 per cent of private consumption expenditure, private households in the lowest income group spend less on transport than on leisure, entertainment, and culture, which accounts for 9.5 per cent of private consumption expenditure. In comparison, private households in the highest category spend 16 per cent of their private consumption expenditure on transport (see Table 2). This is more than three times as much as private households in the lowest income group.

Figure 9: Selected transport sectors



Source: Eurostat 2022b, Destatis 2022b, own calculation and graph.
*September 2022

Figure 9 shows the development of individual components of the transport category over time. The prices for transport services have increased significantly more than those for the purchase of vehicles. The operation of private transport follows the development of the general price level. The overall transport sector developed from an index value of 69.3 in 1996 to 104.7 in 2020 and is at 125.2 in 2022. Transport services showed an unusual development in 2022: they fell from an index value of 108.4 in 2021 to 101.1 in 2022.

Between June and August 2022, we saw a reduction in the price of operating private vehicles and transport services. The tax reduction on petrol and diesel fuels has noticeably reduced the costs of operating private means of transport. According to initial studies, 100 per cent of the temporary tax reduction was passed on to the consumer in the case of diesel, and approximately 85 per cent in the case of petrol (Fuest et al. 2022). However, this measure mainly benefited high-income private households. At the same time, temporary tax cuts for fuels in times of an energy crisis circumvent the incentives to reduce gas usage. The necessary reduction in demand for fuels has thus been thwarted. However, the even greater reduction of prices in the transport sector can be explained by the uniform '9-Euro Ticket' introduced in Germany. It was introduced for the months of June, July, and August 2022 and included a nationwide public transport ticket for €9 per month. This was financed by state funds of €2.5 billion for three months (Federal Government, 2022a). This was not a price reduction due to cost reduction or expansion of services, but simply a redistribution measure in favour of public transport. The advantage of this ticket was that it prevented car journeys and thus saved energy (VDV 2022). The federal government is currently planning a successor model to the 9-Euro Ticket for €49 a month, financed in part by federal and state funds. Again, this is not a measure to permanently reduce prices. It is merely a subsidy for a certain mode of transportation.

In the long term, prices in the transport sector can only fall if the most important input factor – the costs of operating motor vehicles and transport services – can be reduced. If the transition to e-mobility continues, it must be ensured that the required electricity is available at adequate prices. If this is not fulfilled, prices for the operation of both transport services and private cars can also be expected to rise. The transport sector will thus continue to be particularly affected by rising energy costs in the future.

3.8 Conclusion

This paper investigated what taxes and governmental regulations cause the price level to rise. I showed that most such interventions, often made with good intentions, do not merely internalise externalities but restrict supply through regulations. Therefore, maintaining such regulations in various areas is highly questionable in view of steadily rising consumer prices.

First, an in-depth analysis of the general price level showed that it has risen continuously across almost all uses in recent years. I demonstrated that low-income private households – who spend more than 95 per cent of their gross income on private consumption – are more affected by rising prices than private households in the highest-income category.

The residential market for flats is developing in an almost identical manner to the general price level, whereas the purchase of flats has been subject to immense price increases since 2008–09. Generally, in view of the historically low vacancy rates, the number of newly built flats and houses is too low. Price caps, high requirements for new buildings, staff shortages, or long planning procedures drive up construction costs and prevent a supply-side reaction in the market. Only if costs fall and housing stocks rise, we will see a relaxation in the housing sector in Germany. This would relieve the pressure on low-income private households in particular. Demand-side measures, such as housing allowances, other direct payments, or relief, will not ease the prices in the long term, but rather increase them.

In the future, extensive government intervention in the form of regulations and taxes in the energy sector will further increase the already high prices. The move away from all conventional energy sources in a short period of time, in combination with a high share of consumption taxes, makes a large-scale expansion of energy supply in Germany unlikely. Continued operation of nuclear power plants beyond spring 2023 would be one way to lower prices significantly. Only market-oriented and open competition among many potential energy sources can keep prices down and at the same time bring about an efficient allocation of resources.

The abundance of sin taxes in the alcoholic beverages and tobacco sector seems to be more for fiscal than for health reasons.

In the long term, prices in the transport sector can only fall if input costs can be reduced. Provided that the transition to e-mobility continues, it must also be ensured that the required electricity is available at adequate prices.

3.9 Policy recommendations

1. To reduce housing prices in the long term, land prices must be lowered and many housing regulations abolished. To achieve this, more emphasis should be placed on a market-oriented response through simplification of planning procedures, and through simpler and faster designation of building land. Proposals such as a nationwide rent cap will not dampen the rise in living costs. On the contrary, the rent cap in Berlin has shown that rent caps severely restrict the supply of available living space, which, in the long run, causes housing prices to rise.
2. In the energy sector, Germany needs to embrace openness towards technology to find the most efficient path to reduce carbon. The existing EU-ETS certificate trade is the optimal instrument to save CO_2 efficiently, and in a cost-oriented and environmentally friendly manner. Nuclear

power plant lifetimes should be extended, as this can reduce inflationary pressure. For Germany, extending nuclear power beyond 2023 would result in up to 4 per cent lower electricity prices in 2023 and 1.2 per cent lower electricity prices in 2024. In Europe, the electricity price could be 1.6 per cent lower in 2023 and 0.5 per cent lower in 2024. An entry into fracking should also be considered. Depending on the estimate, Germany could meet its domestic gas supply requirement for 4–24 years without imports. To reduce prices in the long term, national excise taxes should be lowered, and more sectors should be included in EU-wide allowance trading instead.

3. Temporary, general tax cuts are a suboptimal way of combating the crisis, as they can lead to unintended, non-beneficial, and false stimuli to demand. Instead, targeted transfers should be used to support low-income private households.

4. Sin taxes on products such as alcohol, tobacco, or coffee should be reduced to the permissible EU minimum. Their health promotion function is questionable in view of additional regulation with the same objective.
5. Prices in the transport sector can only fall if costs for the operation of transport vehicles and services are reduced. As all areas of transport are pursuing a shift towards e-mobility, the necessary energy supply must also be ensured at the same time. A more open approach to finding alternative fuels and drive technologies should be pushed. Measures such as the 9-Euro Ticket or the 49-Euro Ticket are not a permanent measure to reduce inflation, but a subsidy for a certain form of mobility.

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Appendix

Table 1: Share of private household consumption expenditure by monthly net household income and in-tended use

	Net household income					
Intended use	**Total**	**under € 1,300**	**1.300€ to 2.600€**	**2.600€ to 3.600€**	**3.600€ to 5.000€**	**over 5.000€**
Food, beverages and tobacco products, etc.	15.4%	18.9%	17.1%	16.2%	15.6%	13.7%
Clothing and shoes	3.7%	2.9%	3.5%	3.7%	3.8%	3.9%
Housing, energy, housing maintenance	36.8%	49.7%	41.8%	39.5%	36.9%	31.5%
Interior decoration, household appliances, objects	6.4%	4.9%	5.3%	6.0%	6.4%	7.3%
Health	4.3%	2.4%	2.9%	3.4%	3.9%	5.7%
Traffic	12.9%	5.0%	10.4%	11.3%	13.0%	16.0%
Post and	2.7%	3.7%	3.3%	3.0%	2.6%	2.2%
Leisure, entertainment and culture	9.5%	6.5%	8.5%	9.2%	9.1%	10.9%
Education	0.6%	-0.4%	0.3%	0.5%	0.6%	0.8%
Accommodation and restaurant services	4.1%	2.4%	3.1%	3.8%	4.5%	4.7%
Other goods and services	3.6%	3.3%	3.8%	3.6%	3.6%	3.4%

Source: Destatis 2020b, own calculation and presentation

Table 2: Vacancy rates in the German federal states and select cities, 2007–2020

Vacancy rates in %	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total	3.90%	3.70%	3.70%	3.60%	3.40%	3.30%	3.10%	3.00%	3.00%	2.90%	2.90%	2.80%	2.80%	2.80%
Baden-Wuerttemberg	2.20%	2.10%	2.20%	2.30%	2.20%	2.00%	1.90%	1.80%	1.70%	1.60%	1.50%	1.40%	1.40%	1.40%
Bavaria	2.10%	2.10%	2.10%	2.00%	1.80%	1.70%	1.60%	1.60%	1.50%	1.40%	1.40%	1.30%	1.30%	1.30%
Berlin	4.20%	3.50%	3.30%	2.60%	2.30%	2.00%	1.80%	1.50%	1.20%	1.10%	0.90%	0.80%	0.80%	0.90%
Brandenburg	5.50%	5.80%	5.80%	5.60%	5.30%	5.30%	5.10%	5.00%	5.00%	5.00%	4.90%	4.90%	4.70%	4.70%
Bremen	4.70%	3.50%	3.40%	3.30%	3.40%	3.30%	3.30%	3.10%	2.90%	2.80%	2.80%	2.70%	2.70%	2.80%
Hamburg	1.80%	1.50%	1.00%	0.70%	0.70%	0.70%	0.70%	0.70%	0.60%	0.60%	0.50%	0.50%	0.50%	0.50%
Hesse	2.80%	2.80%	2.80%	2.60%	2.40%	2.20%	2.20%	2.10%	2.00%	2.00%	1.90%	1.80%	1.80%	1.70%
Mecklenburg-Western Pomerania	5.60%	5.40%	5.30%	5.20%	5.10%	4.90%	4.80%	4.70%	4.70%	4.80%	4.80%	4.80%	4.80%	4.80%
Lower Saxony	4.10%	3.90%	3.80%	3.80%	3.70%	3.60%	3.50%	3.40%	3.40%	3.40%	3.30%	3.30%	3.30%	3.20%
North Rhine-Westphalia	3.40%	3.50%	3.60%	3.60%	3.40%	3.30%	3.20%	3.10%	3.10%	3.10%	3.00%	3.00%	3.00%	3.00%
Rhineland-Palatinate	3.30%	3.50%	3.50%	3.50%	3.50%	3.50%	3.40%	3.30%	3.30%	3.20%	3.10%	3.10%	3.00%	3.00%
Saarland	4.30%	4.00%	4.30%	4.40%	4.30%	4.20%	4.20%	4.30%	4.10%	4.10%	4.20%	4.20%	4.30%	4.40%
Saxony	8.40%	7.70%	7.70%	7.60%	7.50%	7.20%	6.80%	6.50%	6.50%	6.50%	6.40%	6.40%	6.40%	6.60%
Saxony-Anhalt	8.90%	8.20%	8.00%	7.70%	7.50%	7.20%	7.00%	7.00%	7.20%	7.30%	7.50%	7.70%	7.80%	8.10%
Schleswig-Holstein	3.10%	3.00%	3.00%	2.90%	2.90%	2.90%	2.80%	2.70%	2.70%	2.60%	2.60%	2.50%	2.50%	2.50%
Thuringia	6.20%	5.40%	5.50%	5.50%	5.40%	5.20%	5.10%	5.20%	5.20%	5.40%	5.50%	5.70%	5.80%	6.00%
Berlin	4.20%	3.50%	3.30%	2.60%	2.30%	2.00%	1.80%	1.50%	1.20%	1.10%	0.90%	0.80%	0.80%	0.90%
Hamburg	1.80%	1.50%	1.00%	0.70%	0.70%	0.70%	0.70%	0.70%	0.60%	0.60%	0.50%	0.50%	0.50%	0.50%
Bremen	4.70%	3.50%	3.40%	3.30%	3.40%	3.30%	3.30%	3.10%	2.90%	2.80%	2.80%	2.70%	2.70%	2.80%
Munich	1.50%	1.90%	1.60%	1.20%	0.60%	0.50%	0.40%	0.40%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
Frankfurt	2.40%	2.20%	1.80%	1.20%	1.00%	0.80%	0.70%	0.60%	0.50%	0.50%	0.40%	0.30%	0.20%	0.20%
Leipzig	9.70%	10.40%	10.00%	9.70%	9.50%	8.30%	7.10%	6.00%	5.30%	4.70%	3.50%	2.90%	2.80%	2.70%

Source: empirica - CBRE Group (2021)

Chapter 4
Italy – Supply-side reforms to combat inflation

By Giacomo Da Ros and Carlo Stagnaro

- Inflation is mainly driven by energy commodities and the effects of monetary and fiscal policies. However, it can be tackled by implementing supply-side reforms that increase the supply of certain products and the degree of competition in the market. Additionally, modest fiscal reforms may reduce the price of specific goods.
- This paper deals with the increases in the prices of some goods in Italy. These products include energy, public transportation, lifestyle regulations, and some medicines. All of these products have either become more expensive because of the current inflation wave, or have been traditionally more expensive in Italy than elsewhere due to regulatory or fiscal policies (or both).
- The paper analyzes the price dynamics of these products and suggests a number of (mostly costless) interventions that the current government, formed in October 2022, might want to consider to address the cost-of-living crisis.
- As far as energy products are concerned, the liberalisation of retail electricity and natural gas markets as well as the de-regulation of the opening of new gas stations might result in sizeable savings.
- As far as public transportation is concerned, relying more on tendering rather than inhouse provision by companies controlled by local governments might substantially reduce the costs, resulting either in lower fares, or in lower subsidies. Moreover, long-haul bus transit should be fully liberalised.

- With regards to lifestyle regulations, Italy has traditionally been a relatively tolerant country, as confirmed by the Nanny State Index. However, new taxes should be avoided and the planned tax increases – such as the so-called sugar tax and plastic tax – should be cancelled.
- Italians pay a disproportionately high price on so-called Band-C medicines, i.e. prescription drugs that are paid out-of-pocket and not by the national health service. These drugs can only be sold by pharmacies but not by parapharmacies or medical corners in the large retail outlets, despite registered pharmacists manning the latter as well. A liberalisation of distribution channels for C-band drugs might help Italians save on their out-of-pocket health expenditure.
- The Table below summarises the potential savings from the proposed reforms.

Scope		**Suggested action**	**Expected annual savings [EUR/year]**
Energy	Electricity	Completion of liberalisation	150
	Gas	Completion of liberalisation	300
	Motor fuels	Alignment of excise duties to an intermediate value	–
		Removal of constraints on new stations	80
Local public transport		Awarding the service by tender	300*

Lifestyles	Beer taxation	–	–
	Wine taxation	–	–
	Nicotine products	–	–
	Soft drinks	Abolish sugar tax and plastic tax	–
Pharmacies		Liberalisation of Band-C drugs	45

Like the rest of Europe and the world, Italy has been prey to the worst inflationary episode in recent history. This situation has many causes, including the exceptional level of gas prices (due to the low upstream investments over the past decade and the disappearance of most of the imports from Russia); the expansive monetary and fiscal policies that began after the 2008 Financial Crisis, to which the pandemic gave new impetus; the issues of global supply chains; and the Russian invasion of Ukraine. The effects on household spending have been almost immediate and very significant. In this paper, we focus on some possible (or almost costless) interventions through which the government can support households and businesses by mitigating inflation. These are, for the most part, supply-side reforms – that is, reforms aimed at increasing the supply of certain products and competition in markets – that make limited use of public spending and, at most, structurally reduce the tax burden.

The Italian National Institute of Statstics (ISTAT) consumer price index rose by 8.4 per cent in August. Core inflation (i.e., excluding energy and food), reached 4.4 per cent per year (ISTAT 2022).[36] In the period June 2021–June 2022, however, contractual wages grew by only 1 per cent (ISTAT 2022).[37] This is because wages adapt late and often insufficiently

36 ISTAT (2022) Comunicato Stampa – Prezzi al consumo (dati provvisori) Agosto 2022, 31 August 2022 (https://www.istat.it/it/archivio/274103).

37 ISTAT (2022) Comunicato Stampa - Contratti collettivi e retribuzioni contrattuali - Aprile-Giugno 2022, 27 July 2022 (https://www.istat.it/it/archivio/273390)

to rising prices. As Epicenter's previous report on inflation mentions, inflation and, above all, high energy costs, have a profoundly regressive effect (Epicenter 2022). As the demand for energy and food products is relatively inelastic, price increases in these goods have a heavier impact on poorer households. Moreover, wealthier households are better able to defend themselves against inflation by virtue of their (usually) better access to financial instruments, as shown in Bagus et al. (2014).

Public opinion seems to have grasped the seriousness of the economic situation. According to a survey conducted by the polling company IPSOS on behalf of the World Economic Forum, 32 per cent of Italians were convinced that their standard of living would fall in the course of 2022, while less than 20 per cent expected it to improve. In particular, with regard to energy and transport, a large majority of consumers in all major economies expected increases: for Italians, this proportion was 80 and 78 per cent respectively (Clemence 2022). A report by Assoutenti, a consumer association, noted that there was a 92.7 per cent increase in energy costs in the two–year period from 2021–2022. This figure translates into an average increase of €1,231 in the annual expenditure of Italian households, amounting to a total of €2,558. The association also painted a rather grim picture of the less immediate future: in 2023, they write, 'the bill for energy supplies could reach 5,266 euros per household [...], with a 300 per cent growth in energy expenditure compared to 2020.'[38]

Indeed, the situation is not likely to improve in the very short term: following the drastic reduction in gas flows from Russia, high energy prices are likely to force a substantial number of companies to shut their doors this winter. Industrial demand for electricity and gas has already contracted significantly – by more than 20 per cent in September 2022 compared to the same month in 2021 – indicating a sharp slowdown in production. Action is also needed in order to avert a cold winter for millions of energy-poor households; this would need to be generous enough to have a meaningful impact, but also targeted enough so as to not contribute excessively to additional inflationary pressures. The winter of 2023–24 is likely to be just as harsh. So far, only mild temperatures are keeping prices from skyrocketing.

38 Carli, A. (2022) Bollette: nel biennio 2021-2022 su luce e gas stangata da +1,231 euro per famiglia (+93%), Il Sole 24 Ore, 28 August 2022 (https://www.ilsole24ore.com/art/bollette-biennio-2021-2022-luce-e-gas-stangata-1231-euro-famiglia-93percento-AEjwi8vB)

Italy held its general elections in September 2022. All political parties proposed substantial government intervention, particularly in the energy market. A majority of the proposals consisted of subsidising electricity and power consumption of households and businesses. Such measures, if implemented, would cause significant increases in government expenditure, as well as remove the signalling function of prices. The new government, led by Giorgia Meloni, committed a large share of the new budget law to reducing energy prices, even though some of the most generous subsidies that had been introduced during 2022 have been either reduced of phased out (as is the case of the temporary reduction on fuel taxes).

In the context of this article, we will focus our attention on areas where high prices are the result of, among other factors, wrong policies, excessive taxation, and insufficient or absent liberalisation. The four main areas are energy, public transport, lifestyle-related expenses, and Band-C drugs (i.e., drugs for which a prescription is required, but that are paid for by the patient, and not by the national healthcare service).

Each section of this paper reconstructs the determinants of the observed increases and provides some policy indications of potential interventions to help contain inflation. In each case, the potential savings for a household are estimated (see Table 10)

Table 1: Focus areas and suggested interventions

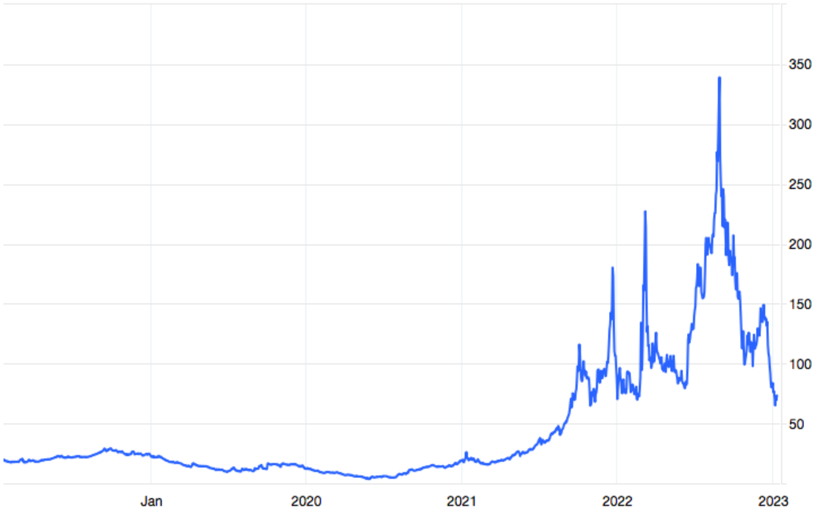
Scope		Suggested action	Expected annual savings [EUR/year]
Energy	Electricity	Completion of liberalisation	150
	Gas	Completion of liberalisation	300
	Motor fuels	Alignment of excise duties to an intermediate value	–
		Removal of constraints on new stations	80
Local public transport		Awarding the service by tender	300*
Lifestyles	Beer taxation	–	–
	Wine taxation	–	–
	Nicotine products	–	–
	Soft drinks	Abolish sugar tax and plastic tax	–
Pharmacies		Liberalisation of Band-C drugs	45

* Savings can be allocated to the ticketing component or to public financing, or both.

4.2. Energy

The energy sector is undoubtedly the most relevant in the public debate at the moment. This is attributable both to its importance in household expenditure and in all productive activities, as well as to the exceptional price increases affecting it. Figure 1 illustrates the price evolution (in euros) of 1 MWh of gas on the Dutch spot market, the TTF, which serves as a benchmark for the price of gas in most of continental Europe.

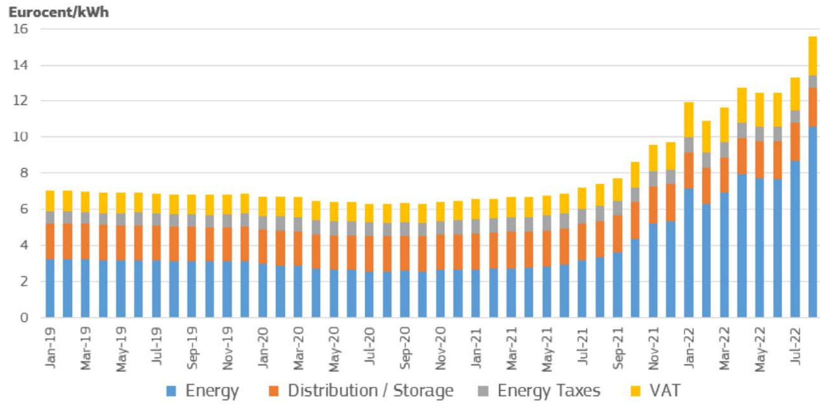
Figure 1: Price evolution of 1 MWh of gas in the TTF (2018-2022)



Source: Trading Economics (n.d.)

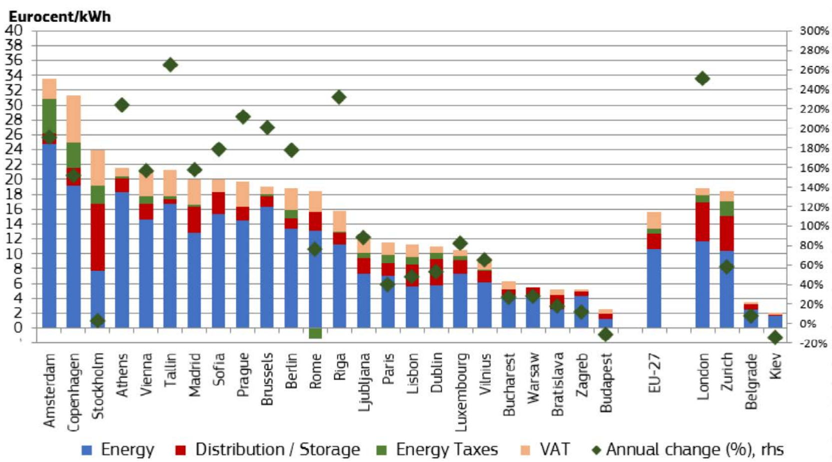
Figure 2 notes the significance of taxation in the average price of natural gas in the European Union. Epicenter's previous paper on this topic noted that taxes on the energy sector in Italy were generally higher than the European average. This translates, as Figure 3 shows, into one of the highest consumer gas prices in Europe and one of the largest year-on-year increases.

Figure 2: Increase in monthly average gas price among EU households (2019-2022)



Source: European Commission (2022)

Figure 3: Breakdown on gas price paid by typical household customers in European capitals and the annual change in prices, May 2022

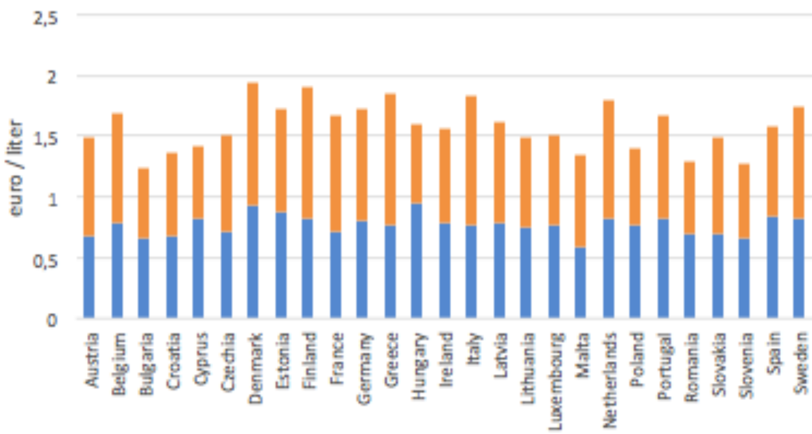


Source: European Commission (2022)

For Italian households, these figures show a doubling of gas-related energy expenses from 2020.

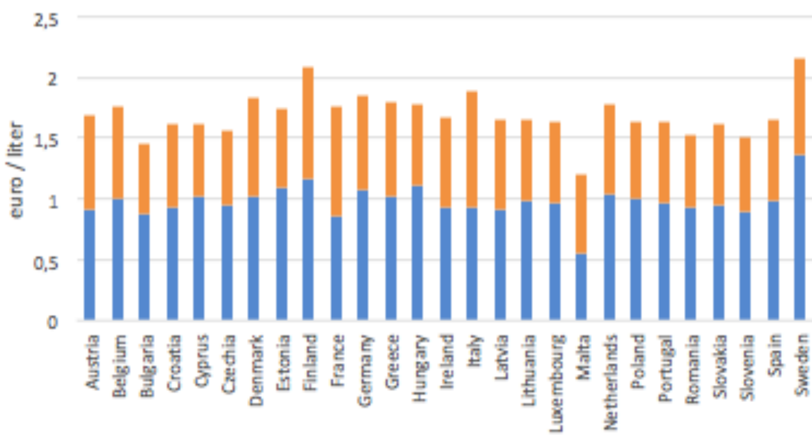
The same problem occurs with petrol, diesel, and other transport fuels, the prices of which are largely dominated by the tax component (Figures 4 and 5).

Figure 4: Average price of Super 95 petrol in the EU



Source: elaboration on EC data (European Commission, Energy. (n.d.)).

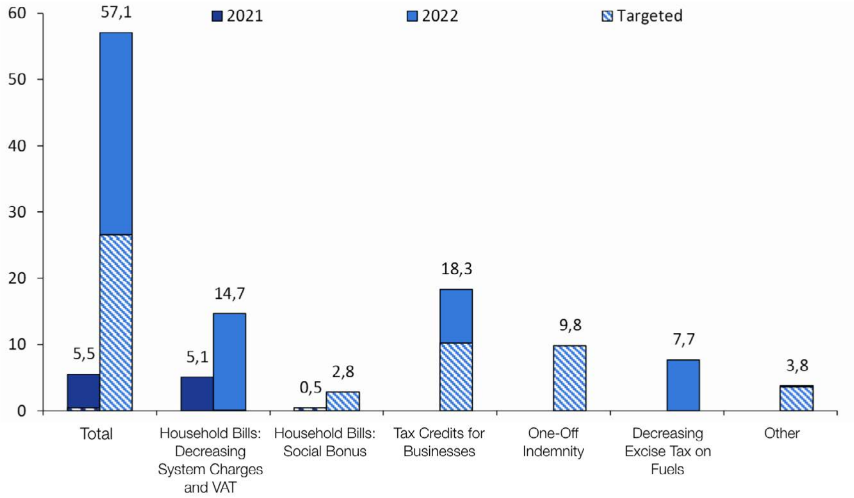
Figure 5: Average price for automotive gasoil fuel in the European Union (GIACOMO TI RICORDI LA DATA?)



Source: elaboration on EC data (European Commission, Energy. (n.d.)).

Intervening in price levels is not trivial. Since the Summer of 2021, the Italian government has put in place several emergency measures, both fiscal and non-fiscal. The former included a number of relief measures financed from general taxation, such as the reduction of the VAT rate on gas to 5 per cent, a subsidy on system charges, and the temporary reduction of excise duties on petrol and diesel by about €250/1,000 litres (these latter subsidies have been phased out as of January 2023). Altogether these measures, which accounted for about 3.3 percentage points of GDP (about €60 billion) in 2022, hardly focused on the weaker segments of the population (see Figure 6) and had a limited overall impact on households (Sgaravatti et. al 2022). In addition to these reliefs, the government adopted several regulatory measures: it gave consumers the option to pay bills in installments at no cost and prohibited electricity and gas suppliers from applying unilateral changes to contracts to take into account the changes in wholesale prices. These seemingly consumer-friendly measures actually risk causing greater problems than they are intended to solve – for example, they induce electricity and gas sellers to withdraw particularly aggressive offers in order to avoid the risk of then being constrained by prices that are incompatible with the general market trend. In addition, many companies struggle to find contracts on the free market, partly due to the financial burdens of operating in the markets, and partly because they struggle to take on the risk associated with current price levels and volatility.

Figure 6: Summary of taxpayers-funded measures to reduce energy prices in 2021 and 2022.



Source: MEF (2022).

Price increases in energy products are largely due to increases in wholesale prices of such commodities such as gas, oil, and electricity. Consequently, there is not much governments can do to prevent them. On the contrary, it is important that public policies – while understandably aimed at alleviating the impacts on households and businesses – do not water down price signals, which are useful in inducing both a substantial reduction in consumption and an investment in new energy resources and infrastructure.

However, there are some measures of both fiscal and regulatory nature that could be implemented to achieve some crucial objectives, beyond simply alleviating the current price levels. In particular, it would be appropriate to ensure a more rational pricing mechanism in the future to mobilise market forces to ensure sustained supply at affordable prices and to allow for an adequate internalisation of the external costs of energy production and consumption (Booth and Stagnaro 2022).

Next, we identify some possible proposals for action relating to the three main types of energy products – electricity, gas, and oil..

4.3 Electricity and gas

The retail markets for electricity and gas have very similar characteristics; therefore, we will develop the two topics together.

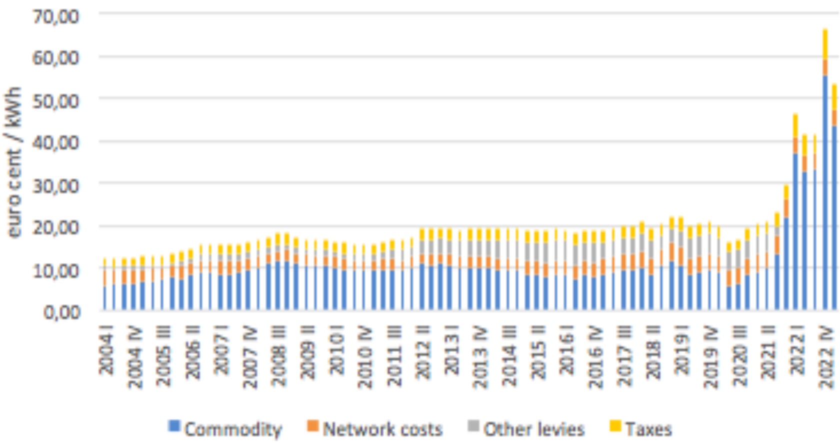
Electricity and gas prices rose at an unprecedented rate despite the significant tax expenditure incurred to mitigate the increases. Although the extraordinary interventions make a limited contribution to price reductions, their suspension would lead to a further increase. At the same time, the cost to the treasury is currently difficult to sustain; it is unrealistic to think that a heavily indebted country like Italy could afford the current levels of spending for much longer.

Estimating the costs of electricity and gas for households and businesses is complex because they depend on the contracts that consumers have signed. We will henceforth limit the analysis to households, although – in the case of electricity – it can also be extended, in essence, to micro-enterprises.

Figures 7 and 8 show the trend in the energy expenditure of a typical household[39] considering the effect of the government's temporary interventions, which involved the removal of general system charges from the electricity and gas bills from the first quarter of 2021 and the reduction of VAT on gas to 5 per cent. The prices reported here refer, in particular, to consumers served under the regime of *tutela*, i.e. those who – without having chosen a supplier on the free market – are served at a regulated tariff, established by the regulator ARERA on the basis of spot market trends. Approximately one-third of households in both markets fall under this service.

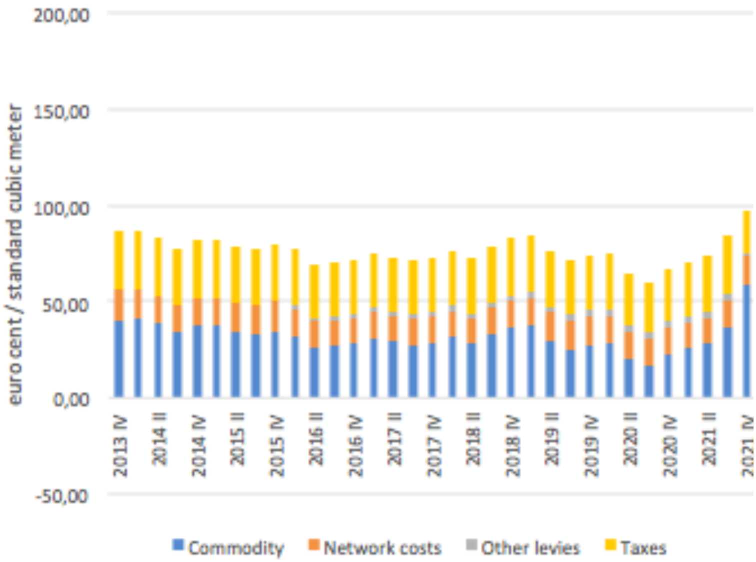
39 A household with electricity consumption of 2,700 kWh per year and contract power of 3 kW, and gas consumption of about 1,400 Smc per year.

Figure 7: Increases in the regulated prices of electricity for the typical household (2004-2022).



Source: elaboration on data from ARERA.

Figure 8: Increases in the regulated prices of natural gas for the typical household (2004-2022).



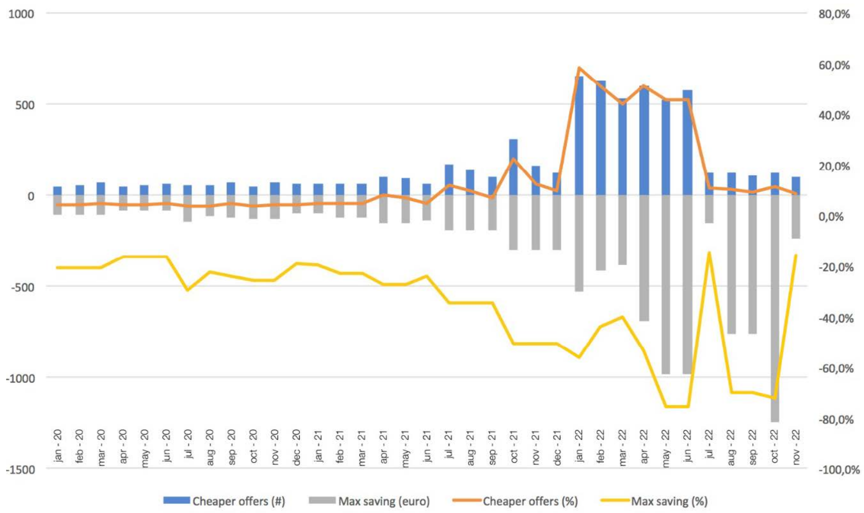
Source: elaboration on data from ARERA.

It is possible to find significantly cheaper offers on the market than what *tutela* offers. The market's ability to offer 'at a discount' is also confirmed by the way in which small and medium-sized enterprises (but not micro-enterprises) transitioned from *tutela* to market prices through an auction mechanism in July 2021, when the *tutela* was phased out for this group of consumers. The auctions closed with favourable prices, although the size of the discounts varied from area to area. According to ARERA's evaluation report, 'The high participation in the recently concluded competitive procedures by a plurality of operators capable of bidding in all territorial areas has in turn led to allocation prices [...] which, in most cases [...] are cheaper' (ARERA 2021).

Currently, the phase-out of *tutela* is planned for January 2024. It is not easy to predict what the outcome of the tenders might be, even if the roadmap is confirmed. In order to achieve significant participation in the tenders and a consumer-friendly pricing policy, it is necessary not only to confirm the path out of *tutela*, but also to remove some obstacles to competition. In particular, the possibility of no-cost installment payments and the ban on unilateral contract adjustments until June 2023 are pushing suppliers to divest customers (as is already happening with medium-sized companies) and to be very cautious with their acquisition policies. Therefore, if the objective is to promote competition, these constraints must necessarily be removed.

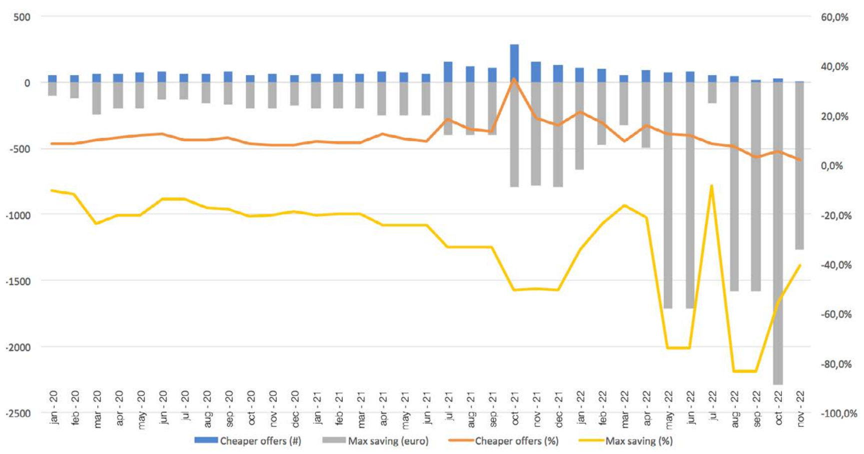
At that point, one can refer to the offers currently available on the market, shown in Figures 9 and 10, to estimate the savings potentially achievable.

Figure 9: Potential savings from switching to the cheapest electricity offer (2020-2022).



Source: elaboration on data from ARERA.

Figure 10: Potential savings from switching to the cheapest natural gas offer (2020-2022).



Source: elaboration on data from ARERA

As a result of the aforementioned regulations, and the high level of uncertainty about future market trends, the size of the discounts, and the number of cheaper offers have, as of summer 2022, significantly reduced. It can therefore be reasonably assumed that full liberalisation could lead to savings in the order of 10 per cent for customers now under *tutela*. The same conditions would be accessible to those customers on the free market who have taken out relatively cheaper offers. Liberalisation should therefore be accompanied by a strong communication campaign to encourage consumers to look for cheaper offers.

Based on estimates of the average annual expenditure of a consumer under protection in November 2022, one can assume a saving per household of about €150 for electricity and €300 for gas.

4.4 Motor fuels

The main cause of Italy's high average diesel and petrol prices, compared to Europe, is the tax component, although other factors may also be involved. However, as part of the emergency measures adopted to tackle the energy crisis, the Italian government reduced excise duties by about €0.25/litre. This is the largest cut among those adopted in Europe for diesel, and the second largest (after Germany) for petrol.

While important, this temporary reduction leaves little room for further fiscal measures. In fact, as of January 2023 – also due to falling oil prices – the temporary tax reduction has been phased out.

Unfortunately the opportunity has not yet been seized to address a long-discussed problem. In fact, the significant difference in excise duties on diesel and petrol used for road transport – around €0.11/litre – has often been considered a distorting element, which implicitly induces a higher consumption of diesel than petrol; meanwhile, it allows saving in CO_2 emissions and increases the production of local pollutants. The 'Catalogue on Environmentally Harmful Subsidies and Environmentally Favourable Subsidies 2019–2020', published by the Ministry of Ecological Transition, therefore suggests eliminating these distortions by setting a common excise tax level (MITE 2021). According to the Ministry, this level should be set at the highest excise duty, i.e., that of diesel fuel. This indication does not seem, however, to be supported by any evidence. In fact, Italian excise duties on both petrol and diesel are among the highest in Europe and seem to exceed the same external costs generated by the combustion of these fuels – the net of externalities from accidents and road wear that obviously do not depend on type of fuel used (Parry, Black, and Vernon 2021).

Therefore, it would be appropriate to take advantage of the phase-out of the temporary excise reduction to identify an intermediate level common to the two fuels. This level could be set at around €0.65/litre, which corresponds to an increase of €0.036/litre for diesel and a reduction of €0.075/litre for petrol.

It is also possible to imagine interventions of a non-fiscal nature. Historically, in Italy, the price of fuel at the so-called 'white pumps' has been significantly lower than at the plants of vertically integrated companies (so-called 'coloured pumps'). Numerous investigations have both empirically documented and theoretically explained this phenomenon. The price difference is particularly pronounced in the case of plants associated with large-scale retail brands, which can normally count on a higher average delivery and thus 'spread' margins more efficiently on the volumes sold (as well as on other non-oil products) (Stagnaro and Verde 2010). In recent years, the discount at white pumps has always fluctuated around €0.03–0.04/litre for both fuels in the case of self-service and in the range of €0.11–0.13/litre in the case of '*servito*'. This gap seems to have closed significantly (in the case of self-service) during 2022, while it persists in the case of full-service.[40] However, this is essentially due to the exceptionally difficult situation that has arisen, in which both price increases and physical shortages (especially of diesel) play a role. In addition, recent years have seen a series of obstacles to the opening of new pumps.– for example, the obligation to equip new stations with facilities for the distribution of eco-friendly fuels (LPG, methane, hydrogen, or electricity), which are generally both more expensive and characterised by greater regulatory and safety constraints; and the growing difficulties in opening new centres of large-scale retail distribution.

We can assume that, as the supply situation normalises, a reduction in constraints could promote the opening of new re-fuelling stations, with estimated savings in the order of €0.03–0.04/litre for self-service and €0.11–0.13/litre for full-service. Assuming that about 60 per cent of fuels are supplied through the first channel and 40 per cent through the second, average savings on each type of fuel could be in the order of €0.06–0.075/litre.

40 'Quale transizione per la rete carburanti', Today@ Staffetta Quotidiana, 12 October 2022.

As a result, an average family could save an estimated €80 per year.

4.5 Public transport

To cope with rising fuel costs, consumers may be pushed to use local public transport. However, even this sector is not immune to price increases. As reported by *Il Sole 24 Ore* daily magazine, public transport tickets and subscriptions in the major Italian cities have seen considerable increases: in Turin, the integrated metropolitan ticket of GTT and Trenitalia rose from €2.70 to €3.50; in the Marche region, there are increases of up to 15 per cent depending on the travel distance; and Trenord has a fixed increase of 3.82 per cent.[41]

Caution is needed when assessing these figures, however, as on average ticket prices in Italy – although constantly rising – are not particularly high when compared to other European and non-European countries.[42] This is due to the fact that public transport in Italy is more subsidised than in most other European countries. In addition, several states – Italy included – have introduced extraordinary measures to temporarily reduce the cost of tickets or even make them free to mitigate the effects of the energy crisis.[43] Even the net of these extraordinary measures, the budget of public transport companies, depends largely on public transfers (which cover about 65–70 per cent of costs), while ticket revenues constitute a residual source of revenue (about 30–35 per cent). These figures are also subject to strong regional variability: they range from a weight of traffic revenues of around 15 per cent in Molise and Calabria to values of over 40 per cent in Lombardy, Sicily, and Veneto. In other countries, the situation is quite different: for example, in Paris, traffic revenues cover around 65 per cent of costs, while in London they cover 55 per cent, and in Berlin, 48 per cent (Carapella, Ponti, and Ramella 2018).

We must therefore look at the issue not merely from the point of view of ticket costs, but also from that of average production costs. An estimate of the production costs of the main Italian and European public transport

41 Casadei, M. and Finizio, M (2022) Aumentano i biglietti dei trasporti: tutti i rincari da Torino a Napoli, Il Sole 24 Ore, 14 September 2022 (https://www.ilsole24ore.com/art/aumentano-biglietti-trasporti-tutti-rincari-torino-napoli-AEqeoTyB)

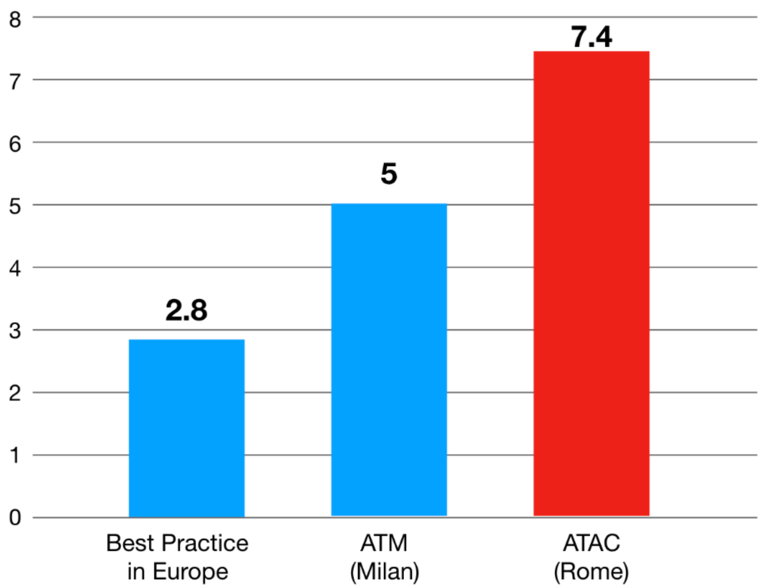
42 Numbeo (n.d.) Price Rankings by Country of One-way Ticket, accessed on (https://www.numbeo.com/cost-of-living/country_price_rankings?itemId=18) (accessed in September 2022).

43 Ünveren, B. (2022) Free public transport gains traction in Europe, DW, 6 May 2022 (https://www.dw.com/en/free-public-transport-in-europe/a-62031236)

companies shows a gap that cannot be explained by the different morphology of Italian cities and territories compared to others.

With regards to local public transport, in particular, the average cost per vehicle-km in Italy is around €5 (including for 'virtuous' companies such as Milan's ATM) with peaks of around €7 – as is the case, for example, with Rome's ATAC (Giuricin 2021) and Genoa's AMT (Gastaldi, Quaglino, and Stagnaro 2012). As Figure 11 shows, European best practices, by contrast, are less than €3 (Giuricin 2019).

Figure 11: Average production cost per vehicle-km in some Italian cities (2016-17).



Source: Giuricin (2019).

Similar, albeit less pronounced, results emerge when considering regional rail transport (Carrarini 2020) and with the opening of the long-distance road transport market to online platforms (Mannheimer 2017).

What does this significant gap depend upon? Mainly two aspects: firstly, the widespread public ownership of transport companies; secondly, the lack of contestability of tenders, which deprives operators of any incentive for efficiency (Boitani, Nicolini, and Scarpa 2013). In fact, almost 80 per cent of transport companies are publicly owned or controlled (Mocetti and Roma 2021). As a result, we can cautiously estimate that – through appropriate liberalisation and privatisation policies –an improvement in the quality of service and in the cost-effectiveness and efficiency of management can be achieved, as it has been observed in other EU member states or in the UK as well as, in Italy, in the case of high-speed rail (Giuricin and Tosatti 2018). The cost reduction can be estimated, in the case of local public transport, at around one-third. Taking into account that traffic revenues account for about 30 per cent of the total revenues of transport companies, this means that for the same fares, public subsidies could be halved, or the service could be provided free of charge at the same subsidy level. The estimate for the average saving per family would thus be around €300 (Cittadinanzattiva 2020).

As far as long-distance public transport is concerned, the liberalisation of high-speed rail and the entry of new players in the bus travel market allowed a substantial reduction of average prices before 2020 (Giuricin 2019). With regard to medium-haul distances, bus rates were on average 50 per cent below the corresponding railway tariff, while for long-haul distances the gap was 25 per cent (Beria and Bertolin 2019). After 2020 prices rose, mainly due to pandemic restrictions (Beria, Lunkar and Tolentino 2021). As the restrictions were phased out prices fell again. The liberalisation of long-distance bus transit should be fully implemented by removing the remaining limits and streamlining the procedures to introduce new bus connections.

4.6 Lifestyle regulation

The private consumption choices of citizens are often the subject of public policy interventions from both a regulatory and a fiscal point of view. The reason usually given is that often, individual behaviour causes externalities that burden society as a whole. This explains why, for example, tobacco products are subject to excise duties.

Italy is generally tolerant of private lifestyle choices, even if they may be harmful to one’s health, as long as they are considered legal and socially acceptable. This includes, for example, the consumption of alcoholic beverages, tobacco products, fatty foods, and sugary drinks. However, while the rationale for the presence of externalities is correct, in many cases the regulation or tax treatment goes far beyond what would be justified by theory. Indeed, the design of regulation or taxation is often inspired by moralistic attitudes or the claim to 'improve' society by imposing 'healthy' lifestyles on individuals, regardless of their preferences, choices, and expectations. Such attitudes have often led to draconian regulations, which have not infrequently failed in their objectives and thus proved to be purely geared towards marginalising those who lead a life considered to be immoral (Trovato 2013).

A measure of the intrusiveness of public regulation comes from the Nanny State Index, a project resulting from the cooperation of several European think tanks led by the Institute of Economic Affairs. According to this index, Italy ranks 26th out of 30 nations for the restrictiveness of its lifestyle regulations (Snowdon 2021). In particular, Italy has a tolerant attitude towards alcoholic beverages and tobacco products, while it appears moderately more restrictive with regard to fatty foods and electronic cigarettes (which Italy was the first European country to subject to taxation alongside other nicotine products).

Lifestyle taxation has a significant impact on Italians' household expenditure. Table 2 gives an estimate for a household of three to four members . As far as alcoholic beverages are concerned, we assume that only two members consume alcoholic beverages and that each one's consumption corresponds to the national average per capita.[44] We also assume that three members consume sugar-sweetened beverages (Ozbun 2022). Finally, since on average about a quarter of Italians use tobacco products, we assume that only one of the household members is a smoker and that their cigarette consumption is equal to the national average per capita observed among smokers (ISS 2022).

Table 2 gives an estimate of how much these choices might affect average household expenditure in a household with the aforementioned characteristics.

44 For an estimate of per capita consumption of wine see I numero del vino (2021); for an estimate of per capita consumption of beer: Coldiretti (2021).

Table 2: Impact of lifestyle taxation on household expenditure

	Per capita consumption	Annual expenditure in taxes
Beer	37 litres	€27
Wine	40 litres	-
Cigarettes	11.5	€817
Soft drinks	50 litres	(€5)*
Total		€844 (849)

* Currently suspended.

As Table 2 shows, the extent of the lifestyle tax burden depends almost entirely on the taxation of tobacco products. Currently, neither wine nor sugared beverages are subject to excise or other specific taxes.

This burden should be prevented from increasing further. The issue concerns, in particular, the taxation of sugar-sweetened beverages and the taxation of tobacco products.

As far as sugar-sweetened beverages are concerned, the 2020 Budget Law introduced a 'sugar tax' quantified at €10/hl of finished products or €0.25/kg in the case of products prepared for use after dilution.[45] The application of the tax was, however, suspended. The 'sugar tax' was joined by the so-called 'plastic tax', set at €0.45 per kg of disposable plastic (thus including the plastic used in packaging), which was introduced by the same 2020 Budget Law and is also suspended for the time being until 31 December 2023. The government commited to a final, and formal, abolition of both levies by 2024.[46] It is important that these intentions are fulfilled and that the plastic and sugar taxes are abolished.

As far as nicotine products is concerned, the demand for traditional cigarettes is steadily decreasing due to the stagnation in the number of smokers, about 24 per cent of the population, and a decrease in the number of cigarettes smoked. This decline is probably explained at least

45 'Sugar tax.' IPSoA Wkpedia (n.d.) (https://www.ipsoa.it/wkpedia/sugar-tax)
46 Mobili, M. And Trovati, G. (2022) Plastic and sugar tax also suspended in 2023, then abolished, Il Sole 24 Ore, 30 October 2022 (https://www.ilsole24ore.com/art/plastic-e-sugar-tax-sospese-anche-2023-poi-l-abolizione-AET1ThCC)

in part by the spread of less harmful products such as e-cigarettes (consumed by 2.4 per cent of the population) and heated tobacco cigarettes (consumed by 3.3 per cent of the population). This change in consumer habits is consistent with harm reduction goals, as non-combustible products (such as heated tobacco products or e-cigarettes) are likely to be significantly less harmful for human health than traditional combustion products.

International comparison, however, shows that the taxation of nicotine products in Italy is at a relatively high level. The tax component of the cost for traditional cigarettes (excise duties and VAT) is around 78 per cent (up from 75 per cent in 2008), and is both among the highest in Europe and above the 75 per cent threshold suggested by the World Health Organization. Moreover, the current regulations provide for a series of automatic or semi-automatic levy increase mechanisms. This very combination of the progressive (and consequent) increase in the prices of traditional products and the availability of alternative (cheaper and less harmful) products underpins the decline in demand for cigarettes. The taxation of heated tobacco products itself – currently set at 35 per cent of the excise duty on traditional cigarettes – is set to increase to 40 per cent as of 1 January 2023.

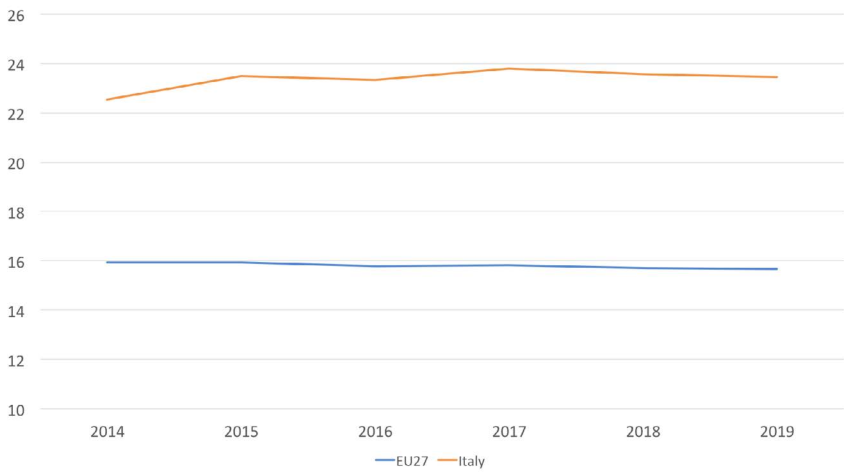
The system thus appears to be consistent with international best practices, both from the point of view of the 'Pigouvian' function of tobacco taxation and from that of the implicit incentive for smokers to move towards less harmful products. Moreover, the fact that the rules and the evolution of the levy are known *ex ante* allows operators to plan their strategies, balancing not only health protection and the exercise of freedom of enterprise (on the part of producers) and consumer choice (on the part of consumers), but also investment and job creation strategies. Ill-designed increases in the tax burden may lead to unplanned and undesirable effects, such as an increase in the black market or a drop in tax revenue (Marzioni, Pandimiglio, and Spallone 2020). Indeed, the revenue from tobacco taxation has increased in recent years despite the reduction in consumption (ADM 2022).

In 2023 the taxation of nicotine-based products has been both increased and reshuffled, by reducing taxes on medium-priced cigarettes and increasing taxes on rolling tobacco, while stabilizing taxation on e-cigarettes. While the changes are limited as compared with the initial proposals from the government, further increases should be avoided.

4.7. Band-C drugs

The last sector covered by this analysis is pharmaceuticals. Although it is not currently affected by temporary price increases, the prices paid by Italian consumers for pharmaceutical products are historically high, as Figure 12 illustrates; it depicts the out-of-pocket expenses that households face for health services and products. The figures for Italy are consistently higher than the European average.

Figure 12: Out-of-pocket expenditure on medicines by an average household (2014-2018).



Source: elaboration on data from Eurostat.

In addition, the take-up rate of generic medicines (which are usually cheaper than their name brand counterparts), is around 20 per cent lower in Italy than the EU average. In a previous paper, we identified a number of potential causes of this phenomenon, including the regulation of the so-called pharmaceutical payback, according to which pharmaceutical companies are required to contribute to the coverage of regional ceiling overruns in pharmaceutical expenditure (Epicenter 2022; Belardinelli 2019). Here, we would like to focus on the regulation of Band-C drugs, i.e., medicines that require a prescription but are paid for entirely by the patient.

Such drugs can only be sold through traditional pharmacies. These establishments are characterised by relatively high margins and an antiquated industrial organisation based on small individual practice. Their organisation is influenced by regulatory constraints that were removed only a few years ago with the elimination of the ceiling of four licences per owner and the possibility of non-professional shareholders (Stagnaro 2019). There is no objective justification why such medicines cannot be sold by parapharmacies or in supermarket corners: in fact, these establishments are led by a registered pharmacist in exactly the same way as traditional pharmacies (Capone 2015). Moreover, the demand for C-range medicines does not depend on the will of the patient or the pharmacist, but on the doctor's prescriptions. It is therefore to be considered totally exogenous to the distribution methods.

A survey of the cost of non-prescription drugs in different distribution channels showed that the price in parapharmacies was on average 3–14 per cent lower than in traditional pharmacies (depending on the type of drug). The difference exceeds 20–30 per cent when corners at large-scale retail outlets are considered (Salerno 2015). Nevertheless, pharmacies are still the predominant channel, accounting for more than three-quarters of the market.[47] This is probably due not only to the fact that consumers have a greater familiarity with pharmacies compared to other similar oulets, but also because many products can only be found in traditional pharmacies.

It is estimated that the liberalisation of C-range medicines could lead to savings of at least 10 per cent on this type of medicine. If this were to result in a greater shift of sales from the pharmaceutical to the parapharmaceutical channel, the reduction in expenditure could also affect traditional pharmacies – assuming they wish to retain customers by reducing prices – and thus other products already exposed to competition (such as over-the-counter medicines).

Taking pharmaceutical expenditure per capita into account (Trotta 2022),[48] this could translate into annual savings of around €45 per family.

47 Pozzetti, R. (2020) Commercial pharmaceutical market: trends by sales channel, Mark Up, 24 February 2020 (https://www.mark-up.it/mercato-farmaceutico-commerciale-landamento-per-canale-di-vendita/ -canale-di-vendita/)

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Chapter 5
Poland – The (Un)obvious reasons for the rising cost of living

By Wiktor Wojciechowski

- In October 2022, inflation in Poland amounted to 17.9 per cent. Compared to the previous month, we recorded an increase of 1.8 per cent. This is the highest inflation recorded since December 1996. Among the numerous analyses of the reasons for the sudden increase in inflation recorded since the beginning of 2022, not only in Poland but in most EU countries, it is increasingly likely that the above-average rise in prices is largely due to an overly expansive fiscal policy.
- In 2022–2023, additional pensions and the 500 PLUS benefit raised inflation by 1.1 per cent. It is estimated that the payment of the thirteenth and fourteenth pensions, while increasing the public finance deficit, bumped up the average inflation in 2022–2023 by 0.7 percentage points. In turn, the payment of the 'ineffective' part of the 500 PLUS benefit (PLN 36 billion or 88 per cent of PLN 41 billion) increased inflation by an additional 1.1 percentage points. The direct inflationary effect of just these two types of government spending together is, therefore, 1.8 percentage points. Taking into account the additional impact of the PLN depreciation on inflation, we can estimate that fiscal expansion, the low credibility of fiscal policy, and the Polish government's legal conflict with the European Commission, indirectly increased inflation by an additional 0.4 percentage points. According to our estimate, the total impact of government policy on the increase in inflation is about 2.2 percentage points.

- The distribution of minimum wage in 2020 raised the cost of living by 0.07 per cent. Applying average estimates of the elasticity of inflation to changes in the minimum wage in other countries, we can assume that, as a result of its increase in 2020 above the rate of average wages, consumer inflation and the cost of living for households in Poland have been bumped up by 0.7 per cent.
- Every 1 percentage point increase in inflation means the cost of living is PLN 500 higher per year. From the perspective of a person whose earning equal the national average, each percentage point of annual inflation raises the cost of living by PLN 42 per month or as much as PLN 500 per year. The government and the central bank have no direct influence on fuel and food prices, implying that even with the most preventive and credible economic policy possible, inflation in Poland in 2022 would not be zero; nevertheless, the level of core inflation – that is, inflation after excluding the prices of these two categories – could be significantly lower. According to our estimates, the combined effect of the lack of public finance discipline, resulting from the reviewed social transfers and the excessive increase in the minimum wage, bumps up inflation by nearly 3 percentage points. Thus, the direct consequence of the government actions, which we analyse in this chapter, for the average employee is an increase in the cost of living by about PLN 1,500 per year.
- The remedy for the rising cost of rental housing is price regulation. Although the rental prices of apartments in Poland increased in the last year by about 30–40 per cent, rather than controlling these prices, the focus should be on increasing the supply of rental housing. Administrative price locking always distorts the incentives of market participants, which can lead to a reduction in supply, among other things, when it is crucial to increase it. Available research indicates that rent price controls lead to a decrease in the supply of housing, which in the medium and long term raises rental prices rather than lowering them.
- Public awareness that the deficit in public finances, which results from increased state spending, raises the cost of living is severely limited. Meanwhile, the greater the voters' understanding and knowledge that healthy public finances are a source of prosperity and a decrease in the relative cost of living, the more difficult it will be for politicians to present new social spending as a genuine gift to society.

- According to the latest Nanny State Index, in 2021, Poland ranked ninth out of the 30 European countries assessed in a comparison of the amount of taxes and excise taxes imposed on alcohol products, tobacco products, e-cigarettes, and selected food products (e.g., sweetened beverages). Compared to 2019, Poland moved up three places in this ranking, which means that taking into account the average national income, the relative taxation of these goods in Poland has increased.
- The excise tax increase introduced in 2022, and further increases in these charges planned until 2027, will make Poland a country with even more restrictive taxation of these goods. Starting from 2022, excise duty on alcohol is expected to grow by 10 per cent, and on cigarettes by 5 per cent, each year. For a person earning an average salary, this means an additional cost of about PLN 60 per year.
- It is difficult to expect that the health of Poles will significantly improve as a result of the higher prices of these goods. The exact opposite effect may occur; for example, instead of purchasing alcohol from legal sources, some households will seek cheaper substitutes from contraband or so-called home production, which will not always be of sufficiently high quality.
- With the rising cost of living due to increased inflation and the increased taxation on alcohol and cigarettes, Poles' interest in buying them from illegal sources will intensify and the planned additional budget revenues from this may prove to be overstated.

5.1 Introduction

The purpose of this chapter is to analyse the impact of select aspects of economic policy on the cost of living in Poland. Unlike it is frequently argued in public debate, our analysis does not focus on pointing out the amount and differences in the level of taxes that determine the cost of living for households. No reasonable person disputes that high charges increase the cost of living because they reduce disposable income or raise the price of purchased goods. From the perspective of the average household, high taxes reduce the purchasing power of income. Therefore, their reduction seems to be a natural way to reduce the relative cost of living. The problem is that, given the amounts of public spending, in most countries, the room for tax cuts is severely limited. However, any discussion on the amount of tax dissociated from the amount of state spending is redundant. This is because a significant and lasting reduction in tax charges requires a reduction in expenditure. Otherwise, it leads to an increase in the deficit and public debt.

In this chapter, we show that the poor state of public finances significantly increases the cost of living, and the scale of this increase varies strongly among households with different characteristics. Politicians almost always justify increases in public spending and social spending on the basis of the need to increase the income of a select group of beneficiaries, that is, to reduce their relative cost of living. On the practical side, however, such political gifts, unless adequately funded, lead to an increase in the cost of living rather than a reduction. Public awareness that the deficit in public finances, which results from increased state spending, raises the cost of living is severely limited. The greater the voters' understanding and knowledge that healthy public finances are a source of prosperity and a decrease in the relative cost of living, the more difficult it will be for politicians to present new social spending as a genuine gift to society.

In this chapter, we show that one of the important reasons for the significant increase in inflation and the cost of living in Poland and the world – observed since the end of 2020 – is an excessively expansionary fiscal policy. The statement popularised by Milton Friedman in the 1970s that there are 'no free lunches' is more relevant today than many people may think. There is a growing consensus in the economic literature that, along with belated monetary tightening and Russia's aggression against Ukraine, the driving force behind the rising global cost of living is increased public spending, which, according to the official narrative, was supposed to have the opposite effect.

In addition to analysing the impact of fiscal imbalances on the cost of living, this chapter also examines the reasons for the rapid increase in rental housing prices observed over the past year. While the main reason for their growth is increased demand from people who cannot afford to buy their own homes after interest rate hikes, and the influx of refugees from Ukraine, it is also important to recognise regulatory reasons that limit the supply of such housing.

5.1.2 How to compare the costs of living objectively from an international perspective?

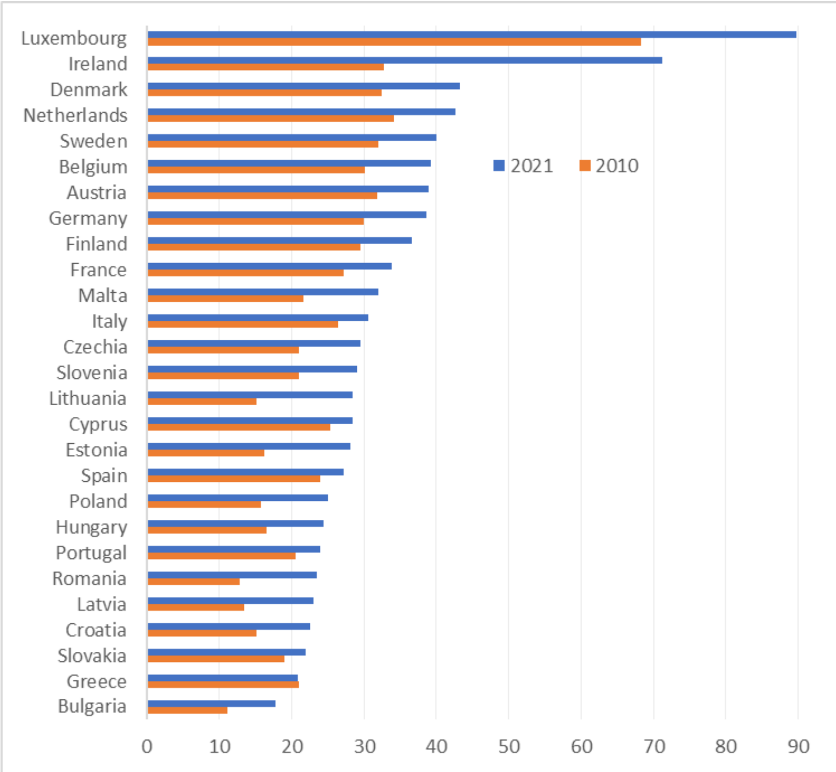
Household living costs are one of the most important determinants of the quality of our lives. Comparative analysis of the cost of living can be based on various indicators. Among them are distinguished aggregate macroeconomic indicators that illustrate the situation at the level of entire economies from the perspective of the average consumer, but also those that take into account the significant differences between households or individuals.

Internationally, the total cost of living is on average higher in more developed countries, such as most Western European countries, than in developing countries, that is, Poland and other post-Soviet countries of Central and Eastern Europe. However, pointing out that the cost of living in Germany or the UK, for example, is on average higher than in Poland is not only hardly revealing, but also says nothing about the relative cost of living, i.e. costs in relation to income. Yet, it is well known that the average level of income earned by residents in highly developed countries is higher than in those in developing countries.

The appropriate indicator that can compare the cost of living between countries, taking into account both the level of income earned and the level of prices, is the amount of income per capita, considering the purchasing power parity (PPP) – that is, the difference in price levels between countries. The actual average level of expenditure in Poland calculated in this way in 2021 was around €25,000, which was 65 per cent of the amount estimated for Germany. This means that considering differences in price levels, in 2021, the average Pole could buy only 65 per cent of the goods and services that the average German could afford with his income.

Although this gap between Poland and highly developed countries is still significant, it has been decreasing steadily for many years. During 2010–2021, the average volume of real spending in Poland, taking PPP into account, increased by nearly 60 per cent, compared to an increase of nearly 30 per cent in Germany. This helped raise the amount of real household spending in Poland from 53 per cent to 65 per cent of the level recorded by our western neighbour (Figure 1).

Figure 1: Level of GDP per capita at purchasing power parity (PPP) in 2010 and 2021 (thousands of euros)



Source: Eurostat.

It is important for the citizens of any country that their real income grows as fast as possible in the medium and long term while the rate of increase in their cost of living grows as slowly as possible. Only such a situation guarantees a sustainable increase in their real income or, from another perspective, a decrease in the real cost of living. Even though the cost of living in highly developed countries is greater than in Poland, if we account for the income earned, on average, the earnings there make it possible to buy more goods than in Poland. The next section shows that the lack of fiscal discipline leads to an increase in inflation and thus increases the cost of living.

5.2.1 Differentiation of inflation and cost of living growth in the EU since 2019

The cost of living can fluctuate strongly due to inflation. The faster the price of goods rises, the higher the cost of living of households. Typically, in an environment of rising inflation, the purchasing power of income declines because the rate of wage growth does not keep up with inflation. By default, taking care of monetary stability – that is, ensuring that the rate of increase in the cost of living is not excessive in relation to the income earned – is the prime concern of central banks. Still, fiscal policy, that is, governments' decisions on the level and structure of revenues as well as public spending, also has a significant impact on the rate of price growth.

The excessive level of spending in relation to the income earned, which results in a deficit in public finances, has a significant impact on the cost of living, as it contributes to inflation. Numerous analyses of the reasons for the high increase in inflation recorded since the beginning of 2022, not only in Poland but practically in most EU countries, increasingly emphasise that the above-average increase in prices recorded in some economies is mainly due to overly expansive fiscal policies[49]. This section explores how the state of public finances is pushing the cost of living up; it also provides an expert estimation of how much of the Consumer Price Index growth rate (CPI inflation) currently observed can be attributed to the selected categories of public expenditure.

Historically, after the outbreak of the global financial crisis in 2008, major central banks first cut interest rates almost to zero, and thereafter, bought assets in so-called quantitative easing; this was mostly accompanied by restrictive fiscal policy. Despite the large monetary expansion, this has not triggered consumer inflation, although it has resulted in strong price increases for some assets. In turn, with the outbreak of the COVID-19 pandemic, the fiscal policy of many countries was significantly loosened.

49 e.g. Summers, L. (2021), The Biden stimulus is admirably ambitious. But it brings some big risks, too., *The Washington Post*.

This time, governments pumped huge amounts of money into their economies. According to the estimates of the International Monetary Fund (WEO 2022), in 2020, additional government spending related to the pandemic accounted for about 10 per cent of the global GDP. The measure of unplanned expenditures was the difference between the actual expenditures of the public finance sector in 2020 and their hypothetical level consistent with the average trends in 2015–2019. In some of the world's largest economies, the size of these extraordinary expenditures was even greater. For example, in the US and the UK, they accounted for nearly 20 per cent of the GDP, while in Germany they accounted for about 6 per cent. It is noteworthy that this fiscal stimulation in recent years has not been accompanied by a significant tightening of monetary policy, or at least the reactions of central banks have been well behind schedule (e.g., World Economic Outlook 2022).

The cumulative effect of expansionary economic policies has been that elevated inflation has become a global phenomenon. The rising inflationary pressures were compounded by a strong increase in energy commodity prices following Russia's aggression against Ukraine in February 2022, which in turn led to an acceleration of inflation, initially in energy, but soon, also in the prices of all goods whose production or distribution requires large energy or fuel inputs.

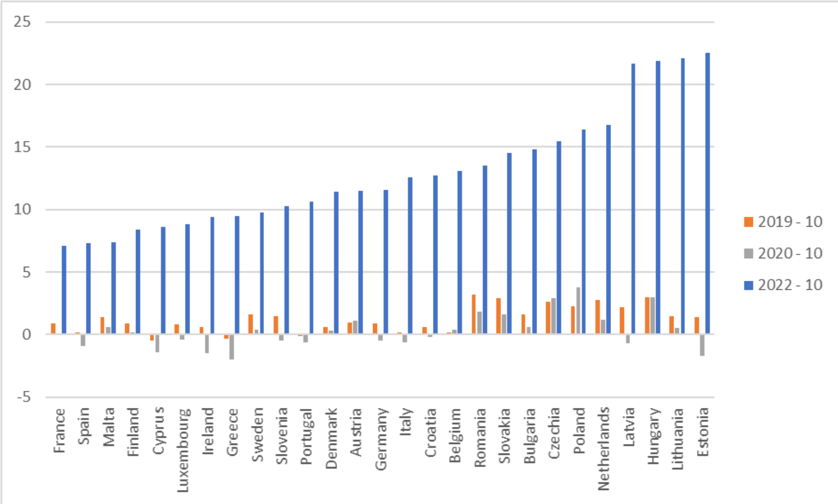
Our analysis of the level of inflation in 2019–2022 in the European Union countries shows that the extent of the increase in the cost of living varied strongly during this period (Figure 2). The main findings are as follows:

- First, in 2019 – and therefore before the COVID-19 pandemic – as well as now (October 2022), inflation levels in new EU member states were significantly higher than in most Western European countries.
- Second, while many Western European countries were recording consumer price deflation at the end of 2019, that is, even before the pandemic broke out, in Poland, Romania, or Hungary, inflation had already begun to accelerate noticeably. At the time, the inflation level was similar to, or even exceeded, the inflation target of the respective central banks.
- Third, all EU countries have seen a significant increase in inflation in recent quarters, with the scale of the increase being significantly higher in the new member states than in Western Europe. Particularly strong inflation growth took place in the Baltic countries, where it exceeded 20

per cent, even though consumer price dynamics before the pandemic were almost identically low in these countries to those recorded in Western European countries at the time.

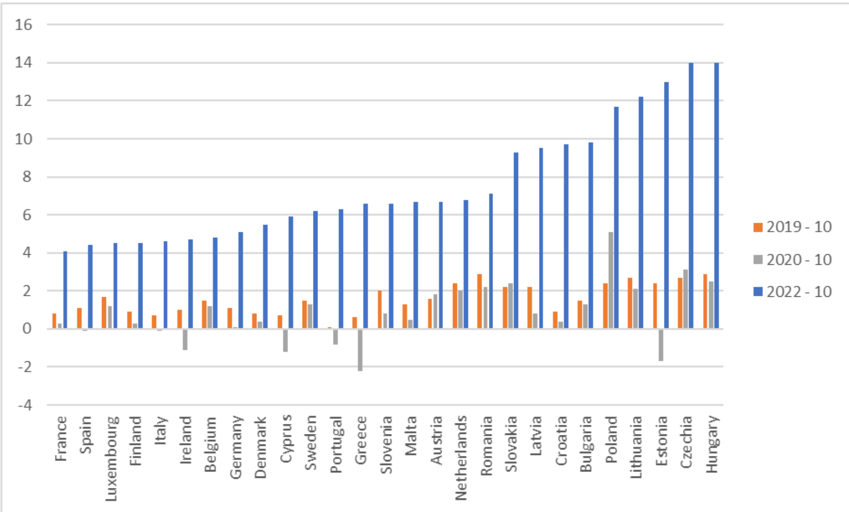
- Fourth, the high increase in inflation in 2021–2022 in parts of the EU indicates that the strong slowdown in economic activity following the pandemic has not extinguished the rising inflationary tensions, but only postponed them. The high levels of core inflation, that is, inflation after excluding energy and food prices, indicates the large scale of these tensions. This is a very important indicator, which illustrates the scale of the increase in the prices of goods that are most strongly affected by monetary policies introduced by central banks. Monetary or fiscal policies of EU countries do not have a significant impact on the price formation of energy resources since these countries are mostly their importers. The same is true of food prices, which are significantly determined by global markets; the domestic food production of individual EU countries does not have a significant impact on this market. At the end of 2020 – the peak of the pandemic – Poland's core inflation based on the Harmonised Index of Consumer Prices (HICP core inflation) was double the National Bank of Poland (NBP) inflation target. By the end of 2022, it was close to 12 per cent – nearly five times the inflation target. High energy and food prices indirectly contribute to the increase in goods included in the core inflation index. However, the high baseline level of core inflation in 2020, and the huge magnitude of its increase until 2022, indicate, above all, the overly expansionary economic policy pursued by the NBP and the Polish government.

Figure 2: HICP inflation (y/y) in 2019–2022 (data for October of each year)



Source: Eurostat.

Figure 3: HICP-based inflation excluding energy, food, alcoholic beverages, and tobacco prices in 2019–2022 (data for October of each year)



Source: Eurostat.

A proper diagnosis of the causes of the rise in inflation is necessary to determine the most important factors that contributed to the observed price increase and what actions are necessary to limit further increases in the cost of living.

- An important factor affecting the cost of living and the level of observed inflation in different countries is not only the price level of individual categories of goods, but also their shares in the aggregate consumer inflation rate. In such a comparison, energy and food shares, which have seen significant growth in global markets, hold a special place. According to the weights used to calculate inflation in 2022, the share of energy in the HICP inflation basket in Poland is 14.5 per cent – only slightly less, for example, than in Estonia (16 per cent) or Latvia (16 per cent) but at the same time more than in Germany (12 per cent), France (10 per cent), or Ireland (9 per cent). This means that with the same scale of energy price increases, the impact on inflation in Poland or Estonia is half as strong as in Germany.
- There are also significant differences between countries in the weight of food and non-alcoholic beverages in the inflation basket. In 2022, in Poland, their share in the HICP inflation basket was 18.4 per cent compared to 12.7 per cent in Germany and as much as 30 per cent in Romania. The higher the level of wealth of the country, the smaller the share of household expenditure on food. This means that with the same magnitude of increase in food prices, the impact on inflation in Poland will be nearly half that of Germany while about 40 per cent less than in Romania.
- How electricity is generated also contributes to the variation in inflation between EU countries. A particularly interesting example here is France, where a significant share of total energy production comes from nuclear power plants. Because nuclear power generation does not produce carbon dioxide emissions, its prices are unaffected by the high price of emission allowances under the EU’s greenhouse gas emissions trading system (EU ETS). The relative increase in energy prices in France is also lower than that of other EU countries due to the high price of coal and natural gas, whose prices have risen sharply since the outbreak of the war in Ukraine, which is the dominant source of energy outside France. These two factors largely explain the relatively limited increase in inflation in France compared to other European countries.

5.2.2 Impact of public finances on the cost of living of households

There is a direct link between the extraordinary scale of public expenditure and the scale of inflation growth after 2019. The increase in fiscal spending recorded in trading partner countries may contribute to inflation in addition to domestic fiscal expansion. The magnitude of this indirect impact depends on the scale of international trade relations. For example, according to estimates by de Soyres, Santacreu, and Young (2022), in the US, as many as 2.5 percentage points of inflation in 2021 were due to increased domestic public spending – about 20 per cent of GDP – and 0.5 percentage points of inflation were due to fiscal expansion in other countries that reported additional demand for goods produced in the US. Therefore, as much as 3 percentage points of inflation in the US can be attributed to overly expansionary fiscal policy deployed domestically and abroad. According to calculations by de Soyres, Santacreu, and Young (2022), in Eurozone countries, local fiscal expansion accounts for approximately 1.8 percentage points of additional inflation; 0.8 percentage points of inflation originate from the fiscal expansion of trading partners (a total of 2.6 percentage points). In developing economies, on the other hand, inflation resulting from domestic fiscal expansion is estimated at 1.3 percentage points, and around 0.3 percentage points can be attributed to fiscal expansion abroad (a total of 1.6 percentage points). The much smaller increase in inflation resulting from the fiscal expansion in developing countries is primarily because poorer countries had less debt capacity in response to the COVID-19 pandemic and could not raise their public spending by a large margin. The analysis of the impact of fiscal expansion on the main US trading partners is interesting in itself. We estimate that while extraordinary public spending in the US has boosted domestic inflation by about 2.5 percentage points, at the same time – by simultaneously weathering demand for foreign-produced goods – it has contributed to jacking up inflation in Canada by 1.7 percentage points, by almost 0.5 percentage points in developing countries, and by around 0.35 percentage points in Eurozone countries.

Analysing the impact of domestic fiscal expansion on inflation growth, Banerjee et al. (2022) show that the magnitude of this impact varies substantially with the initial state of fiscal policy and the degree of central bank independence. According to their estimates, based on an analysis of more than 20 developed countries in year 1972-2017, an increase in the public finance deficit of 1 per cent of GDP will raise inflation by 0.1 percentage points on average over the following two years. However, in economies where the central bank can legitimately finance public spending and fiscal policy becomes expansionary, if the government bond market permits, a 1 per cent GDP increase in the deficit leads to a hike in inflation by as much as about 0.5 percentage points. Therefore, the effect is as much as five times stronger than the average in the sample analysed. Their analysis shows that controlling for the size of fiscal expansion and the impact of other macroeconomic variables, the primary reason for the varying magnitude of inflation growth in developed countries after the COVID-19 pandemic was the quality of fiscal policy pursued; the independence of monetary policy was important but to a significantly lesser extent. Banerjee et al. (2022) show that in countries distinguished by the least reliable fiscal policy and average central bank independence, an increase in the deficit of 1 per cent of GDP increases inflation by about 0.9 percentage points. By comparison, with a similar magnitude of deterioration in public finances, in countries reporting average fiscal credibility, the increase in inflation is half as much (about 0.5 percentage points), and in countries that have the highest fiscal credibility, it is as much as four times lower (about 0.25 percentage points).

In order to better understand the impact of fiscal policy on the level of inflation and the cost of living of households, it is worth pointing out the key channels of this impact:

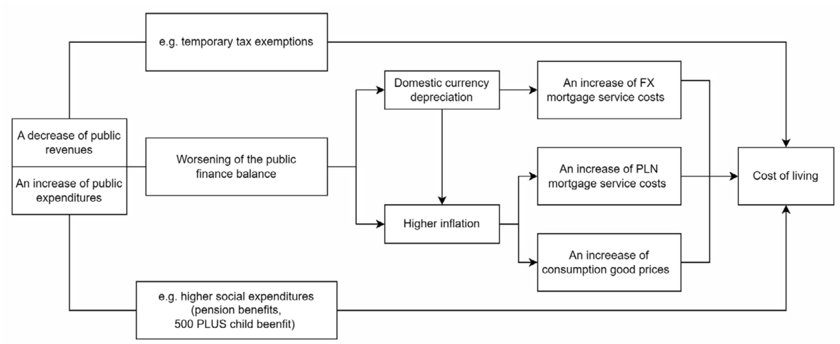
- First, as a result of escalated inflation, the real income of the beneficiaries of social transfers grows much less than their nominal amount. Simply put, some of this extra income is consumed by inflation.
- Second, the imbalance in public finances, which drives up inflation, increases the cost of living for all households. The relative increase in the cost of living in relation to earned income is stronger in those households that do not enjoy additional benefits.
- Third, the increased deficit lowers the credibility of public finances and leads to a depreciation of the PLN . As a result, the cost of servicing foreign currency loans taken out by households, and therefore their cost of living, rises. In addition, domestic prices of all imported goods (e.g., automobiles) and goods whose manufacture requires significant use of imported intermediates (e.g., motor fuels) also rise.
- Fourth, although expansionary fiscal policy encourages price increases, it reduces the effectiveness of monetary policy in taking care of the stable level of the PLN. This makes a tighter monetary policy a necessity to suppress inflation and bring it down to the inflation target, compared to a situation where the government would reduce public spending.

In practice, therefore, to lower inflation, the Monetary Policy Council in Poland has to further increase the level of interest rates and keep them at this increased level for a longer period than if the government's fiscal policy were more restrictive. As a result, the higher interest rates set in Poland raise the cost of living for households with loans denominated in PLN.

- Fifth, we stress that the consumer price index, which is the main and most widely used measure of change in the cost of living for households, does not take into account the changes in the cost of servicing loans that result from the changes in interest rates and exchange rate of the PLN in the case of foreign currency loans.

Figure 1 shows the channels of influence of public finance on the cost of living.

Figure 4: Channels of influence of public finances on the cost of living of households



Source: Author's elaboration.

The research results presented here are particularly relevant for assessing the impact of fiscal policy on inflation growth in Poland. In this chapter we focuse only on selected categories of public spending, namely, the cost of supplemental pension benefits and universal 500 PLUS family support. The choice of these social transfers is not accidental.

The payment of the thirteenth or fourteenth pensions is an obvious break in the pension system, which assumes that the amount of pension benefits received is determined by the amount contributed to the system during one's working years and by the annual valorisation of pensions already granted. The additional payment of benefits in the form of a thirteenth or fourteenth pension increases income in retiree households but at the same time weakens the incentives for working people to extend their working lives in order to 'earn' higher pensions. This is a typical 'gift' from politicians, the cost of which falls on all taxpayers and consumers. These costs result from two elements. First, supernumerary pensions increase public spending and, thus, also increase the deficit and debt of state finances, as they are not covered by additional budget revenues. This debt and the interest will have to be repaid. Second, higher deficits and low credibility of public finances raise inflation and, thus, increase the cost of living for all households. As a result, the actual amount of supplementary pension benefits, both basic and additional, is lower than what would result from their nominal amount. Moreover, by bumping up inflation, these supplementary benefits also reduce the real incomes of all other households.

In 2019–2020, all pensioners in Poland received the thirteenth retirement pension. The one-time cost of such a benefit was about PLN 11–12 billion. In 2021, those in power were even more generous and paid out the thirteenth and fourteenth pensions, which cost more than PLN 23 billion. Also, in 2022, the government increased the household income of retirees again by paying them two additional benefits at a cost of more than PLN 25 billion, or 0.8 per cent of the GDP. The government said it will also pay the same guarantees in 2023, when parliamentary elections are planned. Certainly, the additional benefits have increased the disposable income of retiree households, but at the same time, they have increased the deficit and public debt and, consequently, inflation.

The second expense that directly increases the deficit and debt of public finances is the universal benefit for families with children – 500 PLUS. The annual cost of this payment is PLN 41 billion or 1.3 per cent of the GDP in 2022. Many quantitative studies analyse the impact of this benefit on fertility – its main declared purpose – and on the labour market in Poland (e.g., Magda et al. 2019). In retrospect, there is no evidence that the 500 PLUS benefit contributed to an increase in fertility, although it had a significant impact on the reduction of poverty in families with children. However, it is worth emphasising that the scale of poverty reduction is smaller than some simulation research indicates. For example, Brzeziński and Najsztub 2017 argue that the total eradication of extreme child poverty in Poland could be achieved by spending only 12 per cent of the currently spent amount (Brzeziński and Najsztub 2017). Thus, nearly 90 per cent

of the expenditure on the 500 PLUS benefit can be considered a pure redistribution of income without an effectively defined goal.
Based on the results of the quantitative studies presented here, we can be estimate that the payment of two additional pensions increased the public finance deficit and, subsequently, increased inflation in the years 2022–2023 by about 0.7 percentage points. In turn, the payment of the 'ineffective' part of the 500 PLUS benefit – PLN 36 billion or 88 per cent of PLN 41 billion – increased inflation by an additional 1.1 percentage points. The direct inflationary effect of just these two types of government spending together is therefore 1.8 percentage points.

This estimate should be further augmented by the impact of the observed imbalance in public finances due to bloated spending, among other things, on the weakening of the PLN in relation to foreign currencies. At this point, we wish to make clear that increased spending and the low credibility of fiscal policy in Poland are not the only factors that have contributed to the depreciation of the PLN since the COVID-19 pandemic. They certainly include the Polish government's legal conflict with the European Commission over the judiciary or the blocking of disbursements from the National Reconstruction Program. While it is not possible to separate the impacts of political factors and fiscal imbalances on the PLN's exchange rate, it is prudent to assume that of the roughly 10 per cent currency depreciation over the past two years, about half is due to overly expansionary fiscal policy. Taking into account the National Bank of Poland's estimates of the impact of the PLN's depreciation on inflation (Chmielewski et al., 2020), we can estimate that the indirect impact of fiscal expansion on inflation through the exchange rate channel is about 0.4 percentage points of higher price growth. The combined effect of excessive public spending on account of the low credibility of fiscal policy and the associated depreciation of the PLN can therefore be estimated at 2.2 percentage points of inflation.

5.3 Excessive increase in the minimum wage: a disservice to the public

Raising the minimum wage is a tool that politicians often use to increase the household income of low-skilled workers. Public debate often focuses on whether and to what extent administrative increases in the lowest wages affect employment. It is worth noting that the economic consequences of an increase in the minimum wage can and should be looked at more broadly, and include its impact on price levels and, therefore, the cost of living. Excessive increases in the minimum wage, which reduce the margins earned by entrepreneurs, can lead to price increases, especially for those goods whose production involves an above-average number of workers with relatively low professional skills. This applies to many services, such as bakeries and catering or small maintenance services.

Although many commentators and analysts express the view that an excessive increase in the minimum wage does not impede the growth of the labour force, the findings of empirical studies indicate that this negative effect occurs, and is particularly large, for young people and low-skilled workers. As they lead to job cuts, excessive minimum wage increases are not an appropriate response to rising living costs. For workers who maintain employment after an administrative increase in the minimum wage, such a decision by the authorities can be taken positively, as it leads to an increase in the number of goods they can buy. In their case, the relative cost of living will improve. However, when analysing the effects of an increase in the minimum wage, it is also important to keep in mind the many other people who will lose their jobs as a result of the increase in the lowest wage or remain unemployed or inactive, as employers will create fewer new jobs. The negative effects of raising the minimum wage will have particular impact on the lowest-income earners. In the analysis of phenomena occurring in the economy, very often what is more important and interesting is not what is easy to see or boast about, but what is harder to see and not highlighted.

When evaluating the impact of the minimum wage on the labour market, it is worth considering not only the direct effects but also those whose impact is not apparent at first glance, or where the impact is postponed over time:

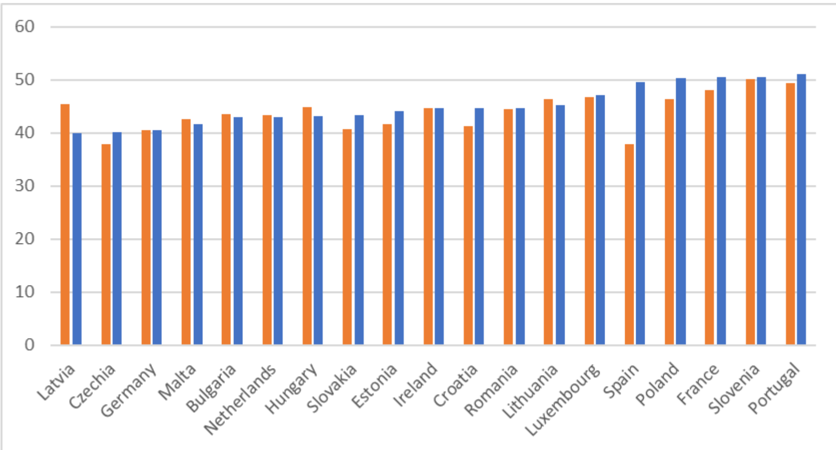
- The increase in minimum wage, which hampers the demand for workers entering the labour market with only a few skills, makes it harder for them to find jobs and gain experience. As a result, they are more likely to experience unemployment at the very start of their careers. Importantly, these negative effects are also evident in the long term – because of their shorter work experience, even after a few years they earn less than those who entered the labour market earlier.
- Excessive increases in the minimum wage increase prices for services whose demand is characterised by low price sensitivity (e.g., locally provided services). Very often, this additional cost is borne by those whose salaries have increased as a result of the administrative increase

in the minimum wage, as they spend a larger portion of their earnings on current consumption than those with higher incomes.

- The rapid increase in a country's minimum wage reduces the competitiveness of goods produced for export and weakens incentives to locate foreign investment in that country. This, in turn, undermines GDP growth and labour demand, primarily among the lowest skilled, who succumb to the delusion of a policy that rapidly increases the minimum wage in the short run. This is a classic example where short-term benefits do not lead to long-term profits.

Minimum wage is not a good tool for raising incomes and lowering the relative cost of living sustainably. Its growth may be positive – but only for those who remain employed. In Poland, the scale of minimum wage increases in recent years has been one of the strongest in the EU. Between 2018 and 2020, the ratio of the minimum wage to the average wage rose from 46 per cent to 50 per cent, making it one of the highest in the EU (Figure 5). In 2021–2022, the minimum wage still stands at about half of the average salaries.

Figure 5: Minimum wage as a percentage of the average wage in EU countries in 2020



Source: Eurostat.

At this point, it is worth noting that the Nobel Prize for David Card, who in one of his articles co-written with Alan Kruger proved that the increase in the minimum wage in New Jersey in the early 1990s caused an increase in the number of employees at fast-food restaurants but does not undermine the general knowledge of economists about the negative impact of excessive minimum wage levels on the labour market. The economic literature describes at least four mechanisms explaining why raising the minimum wage does not always lead to a decrease in employment. This may happen if[50]:

- while adjusting to the new regulations, employers reduce other elements of labour costs and, as a result, the growth in total employment costs is less than the increase in the minimum wage alone (e.g., due to a decrease in training costs following a reduction in employee turnover);
- an increase in the lowest wage strengthens workers' incentives to increase their productivity or when it is accompanied by increased reallocation of workers from less to more productive jobs;
- companies can pass on higher labour costs to the prices of their products without a significant decrease in demand, that is, when the sensitivity of demand to price increases is very low – for example, in locally consumed services. In the case of goods that are traded between entities from different regions or countries, the extent of market competition is much greater and, as a result, the sensitivity of demand to price changes is also greater;
- the level of salaries before the increase in the minimum wage is undermined by the employer's strong position in the local labour market, while at the same time workers do not have the opportunity to take another job (monopsony).

The results of analyses conducted for Poland confirm the conclusions of studies in other countries, which find that excessive increases in the minimum wage devastate jobs. By reducing the number of people earning labour income, excessive increases in minimum wage increase the relative cost of living for households with rising unemployment or economic inactivity. Kamińska and Lewandowski (2015) show that between 2002 and 2013, as a result of excessive increases in the minimum wage, an average of about 110,000 jobs were cut each year in Poland. Moreover, the increase in the minimum wage increased the number of temporary workers and thus deepened dualism in the Polish labour market. Albinowski and Lewandowski (2020) indicate that from 2008–2018, a rapid increase

50 Ciżkowicz P., Wojciechowski W., 2022, Driakiew rynku pracy, Dziennik Gazeta Prawna, 04 July 2022 (https://edgp.gazetaprawna.pl/e-wydanie/58337,4-lutego-2022/74056,Dziennik-Gazeta-Prawna/775621,Driakiew-rynku-pracy.html).

in the minimum wage in Poland reduced the number of workers in the least economically developed regions; only in the richer parts of the country, its increase had no significant impact on employment.
In addition to worsening the situation of households by suppressing the demand for labour, excessive increases in the minimum wage can also lead to an increase in the cost of living by jacking up inflation. In view of the administrative increase in the minimum wage, employers may try to pass on the increased labour costs to the final prices of their goods. This will be the case particularly if an increase in the minimum wage is not accompanied by improvements in labour productivity. The results of studies on the UK (Wilson 2020), Hungary (Harasztosi and Lindner 2019), or the US (Aaronson et al. 2005) indicate that a 10 per cent increase in the minimum wage increases inflation by about 0.2–1.5 per cent. In the case of Poland, a 15.6 per cent jump in the minimum wage occurred in 2020, when its ratio to the average wage in the economy increased from 56 per cent to 50 per cent. This surge in the minimum wage was primarily because it was set at a very high level in the fall of 2019, with an additional contribution from a slightly lower increase in average wages due to the COVID-19 pandemic. If the ratio of the minimum wage to the average wage in the economy were to remain at the starting level of 46 per cent in 2020, it would be PLN 2390 instead of PLN 2600, i.e. about 8 per cent lower than it actually was. Using average estimates of the elasticity of inflation to changes in the minimum wage in other countries, it can be assumed that, as a result of its increase in 2020 above the rate of average wages, consumer inflation and the cost of living for households in Poland have been risen by about 0.7 percentage points.

5.4 Anti-inflation shields: nice for your wallet but a hindrance in the fight against inflation

As part of the protective measures for households, in 2022 the government introduced several changes consisting of a temporary reduction in the amount of VAT or excise duty. This so-called inflation shield was supposed to be in force until the end of July 2022. Thereafter, it was extended until the end of October, and most recently, until the end of December 2022. Although its implementation has reduced the prices of some goods by a step, we cannot expect that it will be a tool for reducing inflation permanently. First, the anti-inflation shield is, by definition, a temporary solution. Even if it reduces the price level of certain goods temporarily, rational households know that in the short horizon, the prices of these goods will rise again. If tax cuts are not accompanied by a commensurate permanent reduction in government spending, then anti-inflation shields are a de facto form of temporary fiscal expansion. As a result, current public expenditures remain unchanged but due to lower prices, household expenditures keep increasing. The anti-inflationary shield stimulates demand in the economy and, therefore, works as the exact antithesis of what one would expect from an anti-inflationary economic policy. As we have highlighted in previous sections of the chapter, excessive demand, particularly from fiscal policy, is one of the main reasons for the inflationary rebound currently being observed in Poland and around the world. Again, we can recall Milton Friedman's quote stating that “there is no such thing as a free lunch”. First, the income loss caused by the introduction of the anti-inflation shield in Poland undercuts aggregate demand, thus increasing inflation. Temporary tax cuts can be a tool to boost demand, especially in a recession, rather than a way to limit inflation, especially during an economic overheating period. Second, by weakening the anti-inflationary effects of National Bank rate hikes, the anti-inflation shield reduces the effectiveness of the monetary policy in Poland. As a result, bringing inflation down to the National Bank's target will require a stronger increase in interest rates, keeping them at elevated levels for a longer period than if fiscal policy were less expansionary. In an effort to mitigate the increase in the cost of living temporarily, the anti-inflationary shields, therefore, increase the cost of living, especially for households with loans, regardless of the currency in which these liabilities are denominated. In the case of loans taken out in the Polish PLN, households pay higher interest due to the increase in interest rates, while in the case of foreign currency loans, the higher cost is because of anti-inflation shields – by increasing the deficit of the public finance sector, they contribute to the weakening of the PLN.

According to the Finance Minister's estimates, the extension of the anti-inflation shield by two months will result in a loss of tax revenue by PLN 4.8 billion and excise taxes by about PLN 0.5 billion.[51] It can, therefore, be estimated that each month of the temporary solution increases the deficit of the public finance sector by about PLN 2.6 billion – over PLN 30 billion per year (1 per cent of the GDP). If the shield is to be limited next year, households will experience higher living costs for at least two reasons. First, a rollback of the shield will cause a spike in inflation. Second, the trajectory of inflation will be higher due to the increased deficit of the public finance sector. Third, the low exchange rate of the

51 ‘Anti-inflation shield extended. Budget will be depleted by 5.3 billion from VAT and excise taxes’, *Forsal.pl*, 2 September 2022 (https://forsal.pl/gospodarka/finanse-publiczne/artykuly/8528536,tarcza-antyinflacyjna-przedluzona-koszty-dla-budzetu.html).

PLN due to the reduced credibility of fiscal policy will also have an impact in the direction of higher inflation.

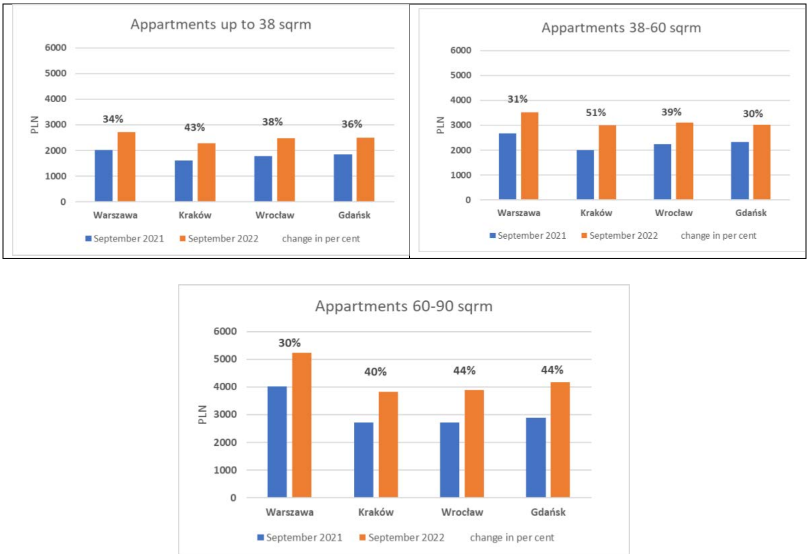
From the beginning of 2023, the government plans to withdraw tax and excise cuts on selected goods, as the reduction of their prices was not accompanied by a proportional reduction in public spending. Thus, from the perspective of price determinants, we first had a temporary reduction in burden, which lowered the prices of these goods but at the same time boosted aggregate demand and inflation. Now, after the rollback of the shield, the previously reduced prices of some of these goods will rise. It can be estimated that a one-time direct effect of withdrawal from the shield could bump up the annual inflation rate by as much as about 2–3 percentage points. On top of this, there may be secondary effects from passing on higher fuel prices to the prices of other goods.

5.5 Excessive protection of tenants will not decrease rental prices.

As a direct consequence of the National Bank of Poland's interest rate hikes that began in late 2021, the cost of servicing mortgages increased and households' creditworthiness declined. Many families who had previously planned to buy their apartment have had to postpone the decision to buy a home for the indefinite future. However, the strong decline in demand for apartments was accompanied by an increase in interest in renting; thus, their prices began to rise strongly. This situation was compounded by a strong increase in demand for rental housing from Ukrainians, who fled after Russia's armed aggression against the country. The combined effect of these two events has been a significant acceleration of rental housing prices in Poland, especially since March 2022.

For example, over the year up to September 2022, the average offer price for renting an apartment up to 38 sq m in Warsaw increased by 34 per cent and in Krakow by 44 per cent. For apartments between 60–90 sq m, rental prices increased by 30 per cent in Warsaw and by more than 40 per cent in other major cities (Figure 6).

Figure 6: Rent on apartments in certain Polish cities increased in 2022



Source: Ofertodom via [www.bankier.pl.](http://www.bankier.pl)

According to Eurostat data[52], only about 5 per cent of households live in a rented apartment, while this figure for the Netherlands, for example, is about 30 per cent and for Germany, as much as 40 per cent. The underdeveloped rental market is characteristic not only of Poland but also of other new EU member states. Since most households in Poland live in units they own, the share of housing rental expenses in the inflation basket is low. According to HICP weights database provided by the Eurostat[53], in 2022, rent forms only 1 per cent of spending because on average we spend a negligible portion of our expenses on rent. By comparison, in the Netherlands and Germany, the share of rental costs in the inflation rate is 9 per cent and 13 per cent respectively. As a result, high rental prices in Poland do not significantly bump up inflation – certainly not as much as many Western European countries. However, these costs are a considerable burden on certain groups of households, mainly young people

52 The Eurostat database on “Income and living conditions” accessed on November 30, 2022.

53 The Eurostat database on “Harmonised Index of Consumer Prices” accessed on November 30, 2022.

who move to large cities to look for work and those studying outside their parents' place of residence. In their case, the observed 30–40 per cent increase in rental prices raises the cost of living.

In addition to increased demand, the high growth in rental housing prices in Poland is also due to regulations that limit the development of the rental housing market. First, the shaping of rental prices by the owners is defined by the law. Thus, a change in rent is possible no more than once every six months, and the notice period for previous terms is three months. Second, in the event of a willingness to change the rental price, apartment tenants can demand that property owners justify the increase on paper. On the other hand, owners may justify changes in rental prices with increased inflation or increased loan instalments. Third, to protect themselves from an unreliable tenant, owners can use an 'occasional lease agreement', in which the tenant agrees to bailiff enforcement and to vacating the occupied apartment in case of default. However, such an agreement must be concluded in the form of a notarial deed, which increases the cost of concluding the transaction. Fourth, the sale prices as well as the rental prices of apartments depend on the supply of new properties. This is hampered by the still-low coverage of major cities by zoning plans and the low supply of land for construction. Fifth, despite a long-standing discussion, regulations on the operation of specialised real estate investment funds, or REITs, have still not been introduced into Polish law. Sixth, a significant barrier to the development of the rental housing market is the restrictive Tenant Protection Law. According to its provisions, even if a tenant does not pay rent, an owner cannot evict him or her without providing a substitute housing unit, social or temporary. Such housing should be provided by the municipality, but in practice, its availability is very limited. If the municipality fails to provide housing for an evicted tenant, the owner can claim for damages from the municipality. Seventh, as in all other areas of economics, the cost of rental housing is bumped up by the legal risks resulting from the lengthy processes of the contracting parties pursuing their claims in the courts. Cuerpo et al. (2014) indicate that speeding up the litigation process is one of the key barriers to the development of an efficient rental housing market.

The development of the rental housing market has significant macroeconomic benefits. The results of a survey conducted in Poland in 2017 indicate that households in Poland perceive property ownership not only as a cheaper way to satisfy housing needs compared to renting, but also as the only possibility to provide a safe place for the family and a real 'feeling of home sweet home' (Rubaszek and Czerniak 2017). Importantly, the study also indicates that one of the main barriers to the development of the rental housing market in Poland is the lack of professional rental services. Rubaszek and Rubio (2020) indicate that the more developed the rental market is, the fewer fluctuations in economic activity affect property prices. As a result, the risk of excessive increases in housing prices during prosperous periods and a sharp break in their prices during economic downturns is reduced. Furthermore, less volatile real estate prices increase the predictability of investments, reducing the risk premium, which should ultimately contribute to lower housing and rental prices.

Galloping rental housing prices have led to increasing proposals in public debate to regulate prices to prevent them from rising further. According to the results of a GfK survey conducted in October 2022, 56 per cent of Poles surveyed would like the state to control rental property prices.[54] Among the possible ideas for regulating rental housing prices are maximum rent prices and additional taxation of companies or households that rent a large number of apartments.

It should be emphasised that public expectations of rent price regulation cannot replace a sound analysis of the actual causes of high rental prices, which undoubtedly drive up the cost of living for households. In Poland, instead of controlling rental prices, the focus should be on increasing the supply of housing that can be rented. Administrative price locking always distorts the incentives of market participants, potentially leading to a reduction in supply when it is necessary to increase it. Unfortunately, due to the difficulty of quantifying the degree of tenant protection, there is no systematically collected data on the subject yet and, as a result, there is also a lack of quantitative analysis to show the benefits of an increased supply of rental housing. A few available studies indicate that rental price control leads to a decrease in housing supply (Diamond, McQuade and Qian 2019), which in the medium and long term raises rental prices instead of lowering them (Elfayoumi et al. 2021).

54 'Poles cannot afford to buy and rent. Prices to regulate?', *Rzeczpospolita*, 20 October 2022.

5.6 How much does inflation cost?

The question of how much inflation costs us is fundamental to its impact on the cost of living. Inflation is a type of tax that, as a result of expansionary economic policies, the authorities impose on their citizens without directly involving the parliament. Inflation rates published in percentages illustrate what portion of our income is taken away by this tax.

Let us try to look at it from the perspective of the average worker who earns the average national salary. The average level of gross monthly wages in Poland in 2021 was PLN 5,683. Under the conditions of 2022, that is, taking into account the changes introduced under the so-called Polish Deal, the monthly in-hand income of such a person was about PLN 4,200. Given the increased price level in 2022, we can assume that, on average, the total income is spent on consumption, that is, households do not accumulate savings. At the time, each percentage point of annual inflation raised the average monthly cost of living by PLN 42, that is, by more than PLN 500 per year. It can be assumed that the government and the central bank have no direct influence on the formation of fuel and food prices, therefore, even with the most preventive and credible economic policy possible, inflation in Poland in 2022 was not zero, but the level of core inflation – inflation after excluding the prices of these two categories – could certainly have been significantly lower.

Let us try to summarise the conclusions about the impact of fiscal expansion and minimum wage regulation on inflation presented earlier. According to this estimate, the combined effect of excessive public spending and low credibility of fiscal policy, which caused the depreciation of the PLN, jacked up inflation by about 2.2 percentage points. The additional impact of excessive minimum wage increases on inflation has been estimated at 0.7 percentage points. In total, this increases inflation by nearly 3 percentage points. Thus, the direct consequence of the analysed actions of the authorities on the average worker is an increase in the cost of living this year by about PLN 1,500.

5.7 Nanny State Index

According to the latest Nanny State Index[55], in 2021 Poland ranked ninth out of the 30 European countries assessed in a comparison of the amount of taxes and excise taxes imposed on alcohol products, tobacco products, e-cigarettes, and selected food products (e.g., sweetened beverages). Compared to 2019, we have moved up three places in this ranking, which means that considering our income, the relative size of taxation on these goods in Poland has increased. The excise tax increase introduced in 2022, and the further increases in these charges planned until 2027, will likely make Poland a country with even more restrictive taxation of certain goods in the following manner:

- First, excise taxes on alcoholic beverages (excluding apple cider and perry) were raised by 10 per cent starting in 2022.
- Second, starting in 2022, the minimum excise rate on cigarettes was increased by 5 per cent and the excise rate on innovative smoking products by 100 per cent.
- Third, the government has adopted the Excise Map, which increases these charges further: between 2023 and 2027, excise taxes on alcohol are to be increased by 5 per cent a year and excise taxes on cigarettes, tobacco, and other smoking products by as much as 10 per cent a year.

Although in the official narrative of the government, the excise tax increases introduced in 2022 and planned for subsequent years are justified by a concern for the health of the Poles, there is no doubt that the main purpose of these changes is to increase revenue. According to the explanatory memorandum to the bill, solely as a result of the planned excise tax increase, the price of a 0.5-litre bottle of vodka is expected to rise from PLN 22 in 2021 to PLN 28.2 in 2027 – about 28 per cent – while the price of a can of beer is expected to rise from PLN 2.8 in 2021 to PLN 3.06 in 2027 – about 9 per cent. For a pack of cigarettes, excise taxes are expected to rise from PLN 0.3 in 2022 to PLN 1.24 in 2027 – more than quadruple.

Due to the relatively small share of alcohol (4.2 per cent) and tobacco (2.0 per cent) in total household spending, the direct impact of the excise tax increase on these goods on inflation in 2022 and 2023 can be estimated at only 0.1 per cent. However, for a person earning the average wage in

55 http://nannystateindex.org/

this economy, this means an additional expense of about PLN 60 per year for the purchase of alcohol and cigarettes.

With a high public finance deficit and plans to maintain reduced burdens on electricity, among other things, in 2023, the government will not abandon its search for additional budget revenues – planned increases in excise taxes on alcohol and cigarettes will go into effect. The health of Poles can hardly be expected to improve significantly as a result of higher prices for these goods. The opposite effect may occur; for example, instead of alcohol from legal sources, some households will seek cheaper substitutes from contraband or so-called home production, which will not always be of reasonable quality. The same could happen with cigarettes. It seems that with the high cost of living due to increased inflation, Poles' interest in illegal alcohol and cigarettes could intensify, especially if the government consistently implements planned excise tax increases on these goods. From this perspective, the planned additional revenue from higher excise taxes may prove to be overstated.

All public spending needs funding. While lowering the charge for household purchases of electricity may seem more justifiable than withholding excise tax increases, this situation shows that we face a short blanket dilemma in Poland's public finances. Even a temporary reduction in some burdens or an increase in some spending requires an increase in taxes or excise taxes on other goods.

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Chapter 6
Greece – Over-taxation and inflation are harming households' purchasing power

By Constantinos Saravakos and Panagiotis Liargovas

- During 2012–2018, Greece was on the prohibitive range of the Laffer curve, with increasing tax rates that did not lead to an increase in tax revenue. This harmed competitiveness, reduced incentives for production, discouraged investments, and increased the shadow economy.
- Greek households spent €44.11 billion to cover their basic needs in 2021 while the tax burden for the same year was 1.7 times larger.
- In 2020, Greece had one of the highest tax burdens in Europe as well as a large shadow economy, low competitiveness in corporate taxes, high inequality, and a high percentage of people living at risk of poverty or social exclusion, compared to the 29 developed European economies.
- In 2021, households with monthly incomes below €750 increased by 109 per cent compared to 2008 levels, while households with monthly incomes over €3501 decreased by 60 per cent.
- In 2021, compared to 2019, household expenditure share increased in food and beverage (2 percentage points), health (1 percentage points), and housing consumption (0.7 percentage points) while household consumption decreased in hotels and restaurants (-2.2 percentage points), recreation and culture (-1.2 percentage points), and clothes (-0.8 percentage points).

- Households' consumption followed the trend of prices over the crisis decade and increased for food and (non-alcoholic) beverages, housing, clothing, alcoholic beverages and tobacco, transportation, communications, and durable household goods.
- Greek citizens seem to pay prices close to the European ones while having incomes significantly below the European average.
- Taxes in Greece have increased the cost of electricity compared to the EU average. In 2021, Greece had the tenth most expensive electricity prices for household consumers among 35 European countries and ranked ninth among 27 EU countries.

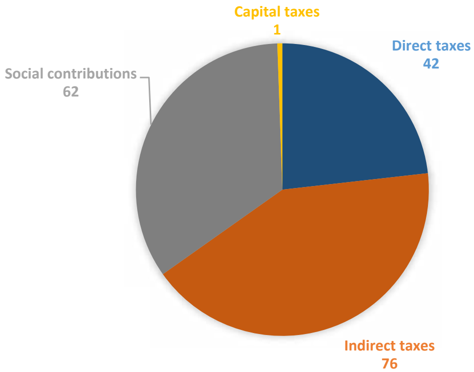
6.1 Introduction: Greece as a fairy tale of over-taxation

Greek citizens experienced a long decade of over-taxation during the 2010's crisis, which does not seem to be ending soon. According to the projections of the Greek Government Budget for 2022 (Ministry of Finance, 2021), the government's total revenue from taxes and social contributions will be €76.2 billion. Out of the 365 days in a year, Greeks will have to work 181 days for the state.

- €32 billion will be collected from indirect taxes (42 per cent of the total tax and social contributions revenue);
- €17.8 billion will be collected from direct taxes (23.4 per cent of the total tax and social contributions revenue);
- €26.1 billion will be collected from social contributions (34.3 per cent of the total tax and social contributions revenue); and
- €170 million will be collected from capital taxes (0.2 per cent of the total tax and social contributions revenue).

In 2022, Greeks will work the longest to pay indirect taxes (76 days), followed by social contributions (62 days), and direct taxes (42 days). Capital taxes account for less than one day of working for the state (Figure 1).

Figure 1: The number of days in 2022 that Greeks worked to pay off each tax type



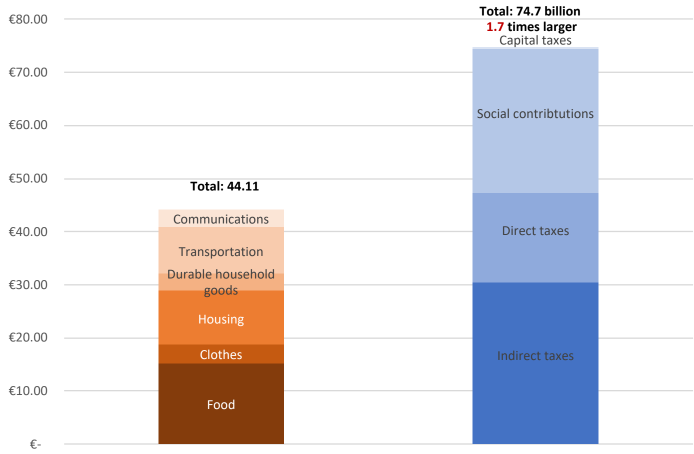
Source: Saravakos (2022).

If we include 2022's borrowing due to the budget deficit, which represents future taxes owed and is estimated to be 7.4 per cent of the GDP or €8 billion, Tax Freedom Day would occur on 20 July – 19 days later.

Indirect taxes are the main source of tax revenue for the government, although this kind of tax policy hurts the poorest households the most. Greece has the third highest standard VAT rate among EU countries (24 per cent) since indirect taxation seems to be the most economically efficient way of raising tax revenue (Tax Foundation, 2021). However, Greece also has a big shadow economy as a result of the high VAT; a recent study has shown that Greece was in the prohibitive range of the Laffer curve during 2012–2018 (Ferreira-Lopes, Martins and Espanhol 2020). The increase in tax rates during the Greek crisis did not lead to a corresponding increase in tax revenue, causing harm to competitiveness, reducing the incentives for production, discouraging investments, and increasing the shadow economy.

6.2.1 Greeks spend almost twice as much on taxation as on basic needs
According to the Household Budget Survey by the Hellenic Statistical Authority (ELSTAT, 2022a), Greek households spent €44.11 billion to cover their basic needs in 2021 while the tax burden for the same year was 1.7 times larger (Figure 2).

Figure 2: Annual household expenses for basic needs and the tax burden in 2021



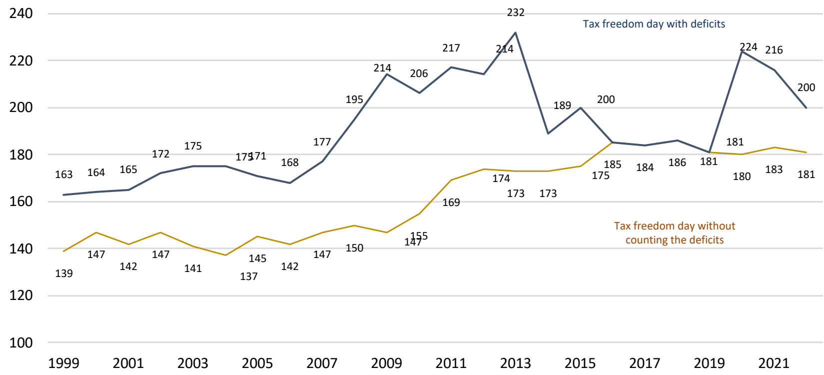
Source: ELSTAT (2022a) and Saravakos (2022); author's calculations.

6.2.2 Rising tax burden since 1999

The number of days Greeks work for the state has been steadily increasing since 1999, culminating in 2018 when Tax Freedom Day came after 186 days, on 6 July. However, if we include the borrowing due to the government's budget deficits, 2013 was the year with the most days worked for the state, with the number soaring to 232 days (Figure 3).

Since the emergence of the Greek crisis, over-taxation has been the key tool used to balance the unprecedented budget deficit, which skyrocketed to 15.4 per cent of the GDP in 2009.

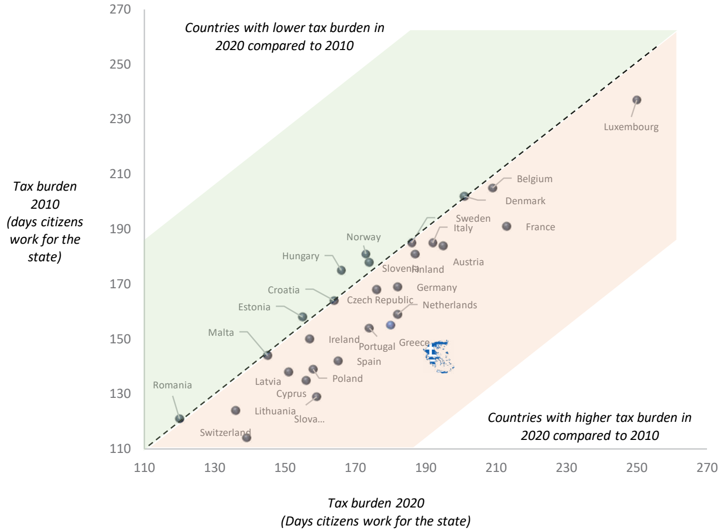
Figure 3: The number of days that Greeks as a whole worked to pay off taxes since 1999



Source: Saravakos (2022).

In 2020, Greece had the second-biggest delay in the Tax Freedom Day among the 28 developed European economies included in the analysis, compared to 2010 (Figure 4).

Figure 4: The tax burden in 2010 and 2020



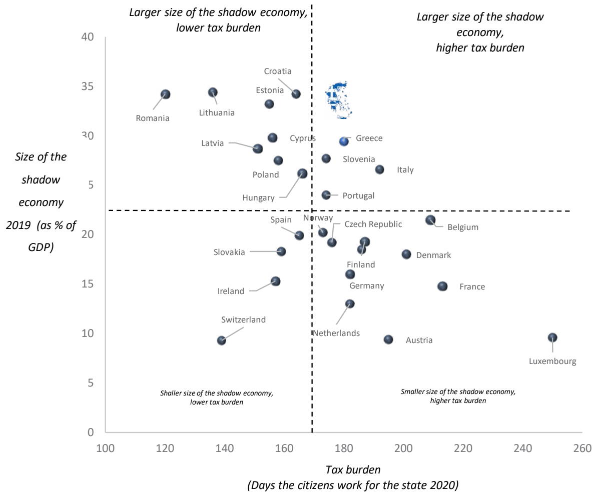
Source: Saravakos (2022).

6.3 Policy outcomes of the high tax burden in Greece and other developed European economies

In 2020, Greece had the 11th highest tax burden among the 28 developed European economies in the analysis (Eurostat 2020), which seems to hinder aspects of economic growth, such as increasing employment (throughout lower personal income tax and social security contribution rates) or support to businesses (OECD, 2022).

At the same time, Greece had a high tax burden and a large shadow economy compared to the 28 developed European economies included in the analysis, although the relationship between the two suggests that the high tax burden should have resulted in a smaller shadow economy (Figure 5).

Figure 5: Tax burden and size of the shadow economy



Note: The comparison of the size of shadow economics and tax burdens is based on the averages of the countries included in the current analysis.

Source: Saravakos (2022).

In addition, the high tax burden in Greece is associated with low competitiveness in corporate taxes, creating an adverse regulatory environment for investments (Figure 6), even though there have been a number of significant tax reforms in the area of corporate income tax since

2019. For example, rate reduction to 24 per cent, tax on distributed dividends becoming a competitive 5 per cent, and the introduction of participation exemption for intragroup distribution of dividends.

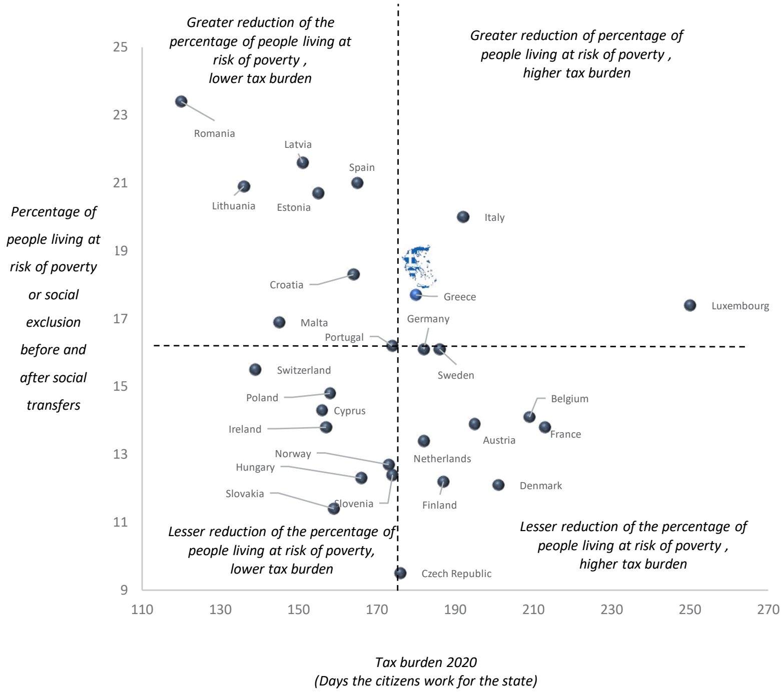
Figure 6: Tax burden and score in the international tax competitiveness index (ITCI) for corporate taxes

Note: The comparison of the international tax competetiveness index scores and tax burdens is based on the averages of the countries included in the current analysis.

Source: Saravakos (2022).

Even though one could argue that the high tax burden in Greece is aimed at improving social policy outcomes, this does not seem to be effective. Despite the high tax burden, Greece has a high percentage of people living at risk of poverty after social transfers, around 17.7 per cent, which is 1.7 percentage points higher than the average of the 28 developed European economies included in the analysis (Figure 7).

Figure 7: The tax burden and the percentage of people living at risk of poverty or social exclusion after social transfers

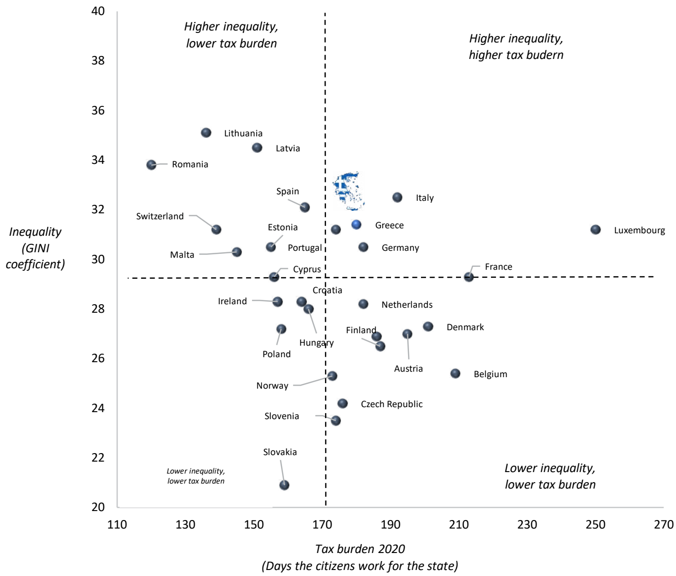


Note: The comparison of risk of poverty and tax burdens is based on the averages of the countries included in the current analysis.

Source: Saravakos (2022).

Moreover, Greece has both a high tax burden and the 7th highest income inequality among the 28 developed European economies included in the analysis and was 2.4 percentage points higher than the average (Figure 8).

Figure 8: Tax burden and inequality



Note: The comparison of inequality and tax burdens is based on the averages of the countries included in the current analysis.

Source: Saravakos (2022).

The policy outcomes in Greece suggest that despite the high tax burden, the social policy is not getting better and some of those resources could have been used more effectively in the market economy, rather than under the government's administration; for instance, by decreasing the corporate taxes, which are most harmful for economic growth (Tax Foundation, 2022) or by decreasing one of the highest VAT rates in EU (OECD, 2022).

6.4 The rising cost of living for Greek households

According to ELSTAT (2022b), the items below recorded the most significant price increases and decreases in November 2022, compared to October 2022:

Increase:

- Bread, other bakery and confectionery products, beef, yoghurt, cheese, olive oil, fresh fruits, frozen vegetables, fruit juices
- alcoholic beverages (not served)

- types of direct household consumption
- house rent, electricity
- new cars, fuel (petrol)
- personal care items
- restaurants, bakeries, cafés

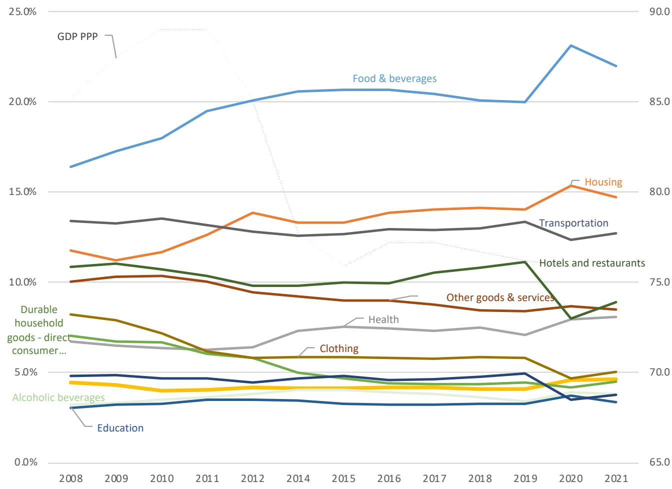
Decrease:

- diesel, transport tickets
- clothing and footwear
- heating oil
- hotels and motels

Given these trends, food and beverages form the biggest share in the consumption of Greek households, followed by housing (water, electricity, gas and other fuels, etc.) (ELSTAT 2022b). In 2021, food and beverages and housing together represented 36.7 per cent of households' total consumption expenditure.

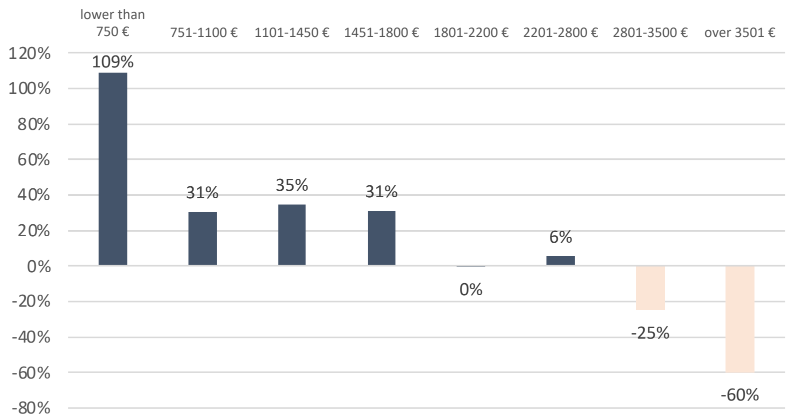
It needs to be stressed that since 2008, Greeks lost 11 per cent of their per capita GDP purchasing power parity (Figure 9). In 2021, households with monthly incomes less than €750 had increased by 109 per cent compared to 2008 levels. At the same time, households living with monthly incomes over €3501 had decreased by 60 per cent, with many of them falling into lower income brackets or migrating out of the country. The percentage change in the household category by monthly income levels from 2008 to 2021 is shown in Figure 10.

Figure 9: Households' annual expenditure in each category as a % of total household expenditure and GDP PPP (reference value = 100 EU-27)



Sources: Eurostat (2022a); ELSTAT (2022b); author's calculations.

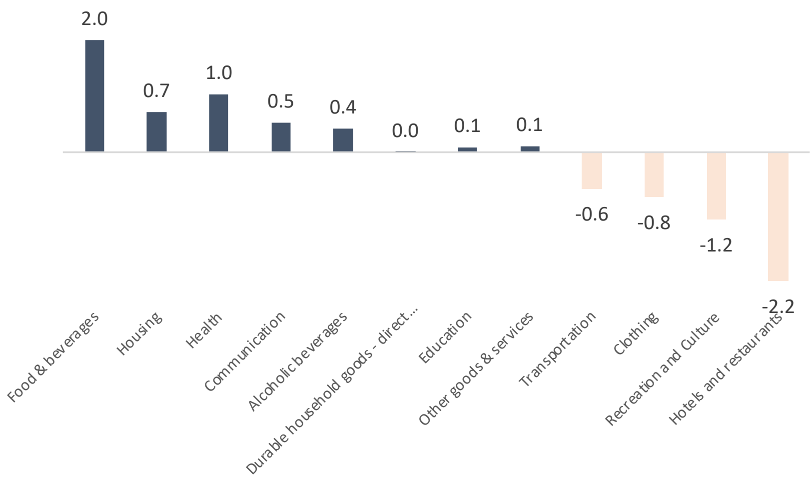
Figure 10: Percentage change from 2008 to 2021 in households' monthly income category



Source: ELSTAT (2022b); author's calculations.

The pandemic in 2020 and the Russian invasion of Ukraine in 2021 raised the share of household expenditure during this period. Compared to 2019, the household expenditure share in 2021 increased for food and beverages (2 percentage points), health (1 percentage points), and housing (0.7 percentage points); while it decreased for hotels and restaurants (-2.2 percentage points), recreation and culture (-1.2 percentage points), and clothes (-0.8 percentage points) (Figure 11).

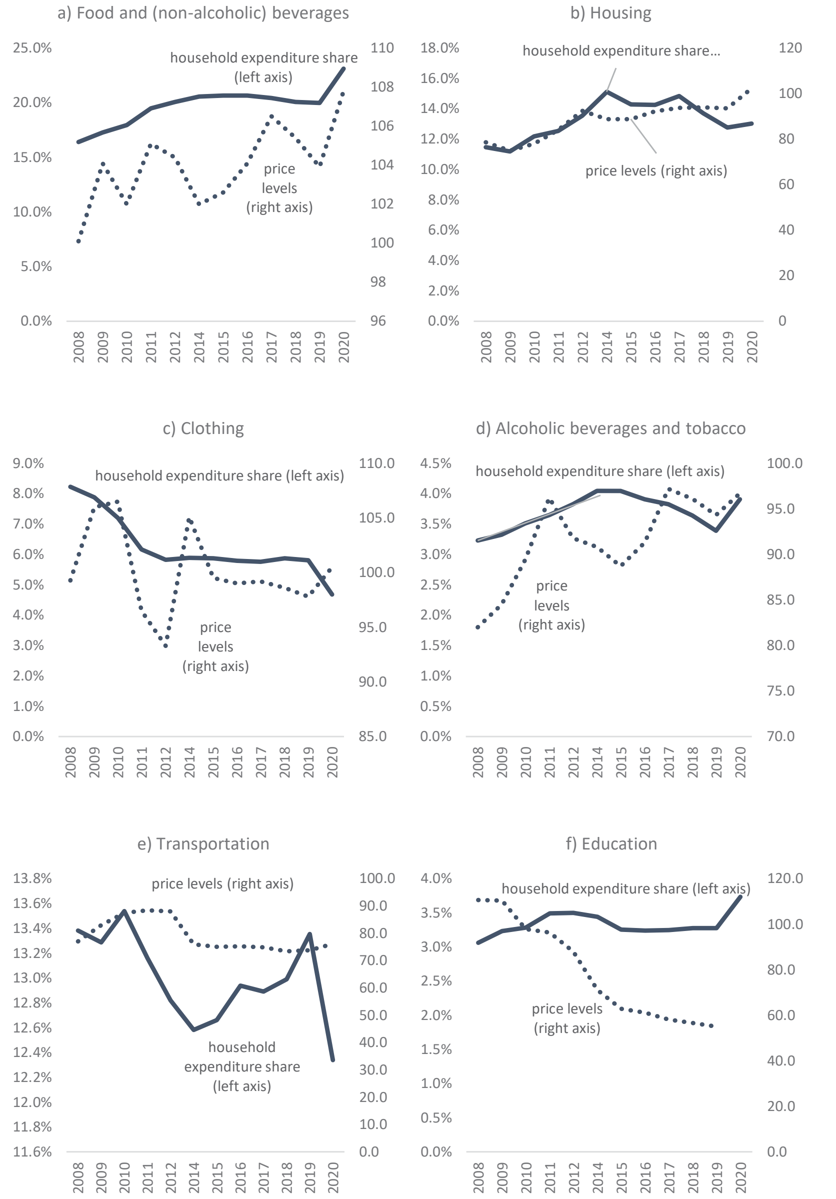
Figure 11: Greek household expenditure (as a % of total household expenditure) in 2019 versus 2021 (change in percentage points per main item)

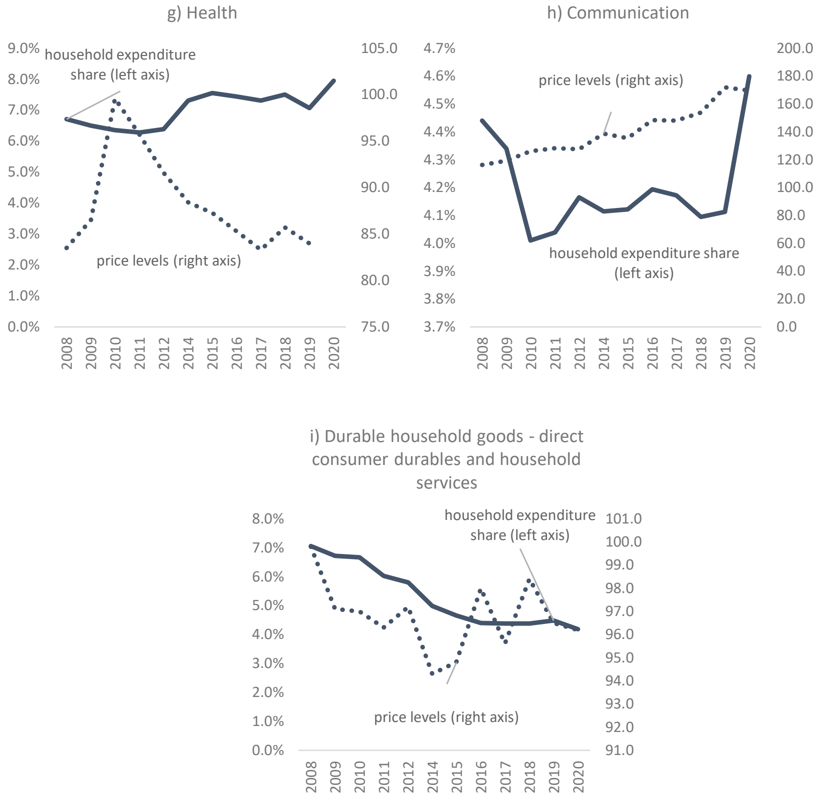


Sources: ELSTAT (2022b); author’s calculations.

In most cases, Greek households’ expenditure share followed the trend of prices over the crisis decade. Households’ consumption increased for food and (non-alcoholic) beverages, housing, clothing, alcoholic beverages and tobacco, transportation, communications, and durable household goods, as prices increased as well. On the other hand, contrary to the price trends, health and education prices significantly dropped, while households’ expenditure shares increased (Figure 12).

Figure 12: Greek household annual expenditure in each category as a % of total household expenditure (straight line) and price levels in purchasing power parity (dotted line) bundled in Greece (reference value = 100 EU-27)



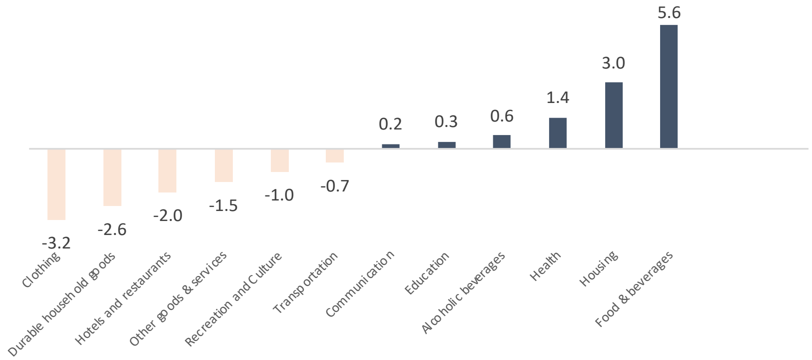


Sources: ELSTAT (2022a); Eurostat (2022b); author's calculations.

Overall, for goods – on comparing the GDP per capita in purchasing power parity and the price levels in Greece – Greek citizens seemed to pay prices close to the European ones, despite having incomes significantly below the European average.

Of the main household expenditure consumption items, the food and beverages category experienced the most severe increase in spending compared to the pre-crisis period (2008), rising from a share of 16.4 per cent of total household expenditure in 2008 to 22 per cent in 2021 (+5.6 percentage points). On the other hand, the most significant decrease in household expenditure consumption happened in clothing (-3.2 percentage points) and durable household goods (-2.6 percentage points) (Figure 13).

Figure 13: Greek household expenditure (as a % of total household expenditure) in 2008 versus 2021 (change in percentage points per main item)



Sources: ELSTAT (2022a); author's calculations

6.5 Greek household expenditure by household income category: Who was affected the most?

The change in households' total expenditure helps us understand how households are trying to cope with the rising cost of living overall but it does not help us identify which household income categories have experienced the most significant changes and have had to bear the increased costs. Figure 14 demonstrates which household monthly income categories saw the most significant increases or decreases in total household expenditure in 2021, compared to 2008. More specifically:

Increase:

- In food and (non-alcoholic) beverages, households with monthly incomes between €751–1000 and €2801–3500 experienced the highest increase in spending of total household expenditure. However, all households seem to be affected significantly.
- In education, households with monthly incomes over €3501 experienced the highest increase in spending of total household expenditure.
- In housing, households with monthly incomes between €2201–2801 experienced the highest increase in spending of total household expenditure. However, all households seem to be affected significantly except households with monthly incomes over €3501, which saw a slight respective decrease.

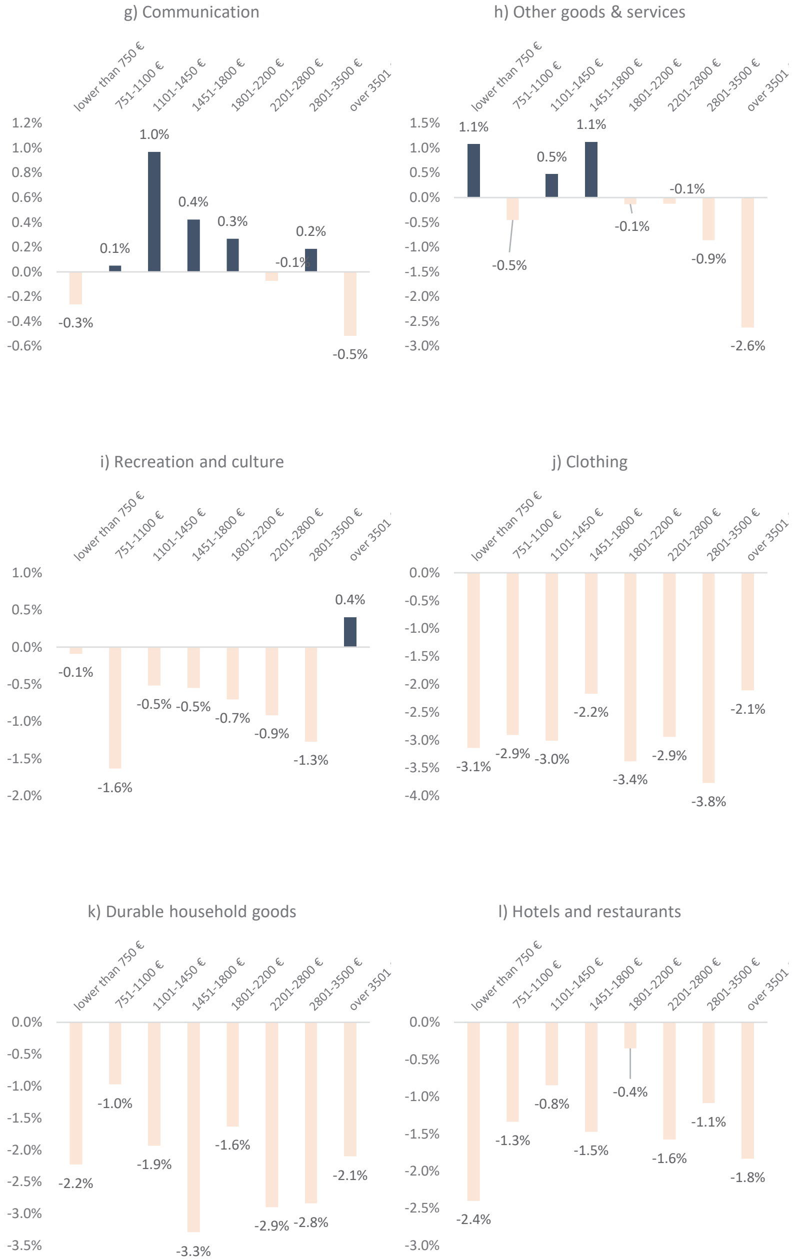
- In alcoholic beverages and tobacco, all households experienced a slight increase in spending of total household expenditure except households with monthly incomes less than €750, which saw a slight decrease.
- In health, households with higher monthly incomes experienced the highest increase in spending of total household expenditure while households with monthly incomes between €1101–1450 saw a significant decrease.
- In transportation, households with monthly incomes between €2201–2801 experienced the highest increase in spending of total household expenditure while households with monthly incomes between €1801–2200 and €2801–3500 saw a decrease.
- In communication, households in the middle of the income categories experienced the highest increase in spending of total household expenditure while households with monthly incomes lower than €750 and over €3501 saw a decrease.

In other goods and services, households with lower monthly incomes experienced an increase in spending of total household expenditure while households with higher monthly incomes saw a decrease.

Decrease:

- In recreation and culture, all households experienced a decrease in spending of total household expenditure except households with higher monthly incomes, which saw a slight increase.
- In clothing, all households experienced a decrease in spending of total household expenditure, with households with monthly incomes between €1801–3500 seeing the highest decrease.
- In durable household goods, all households experienced a decrease in spending of total household expenditure, with households with monthly incomes between €1451–3500 seeing the highest decrease.
- In hotels and restaurants, all households experienced a decrease in spending of total household expenditure, with households with monthly incomes lower than €750 seeing the highest decrease.

Figure 14: Greek household expenditure change (%) from 2008 to 2021 per household monthly income category

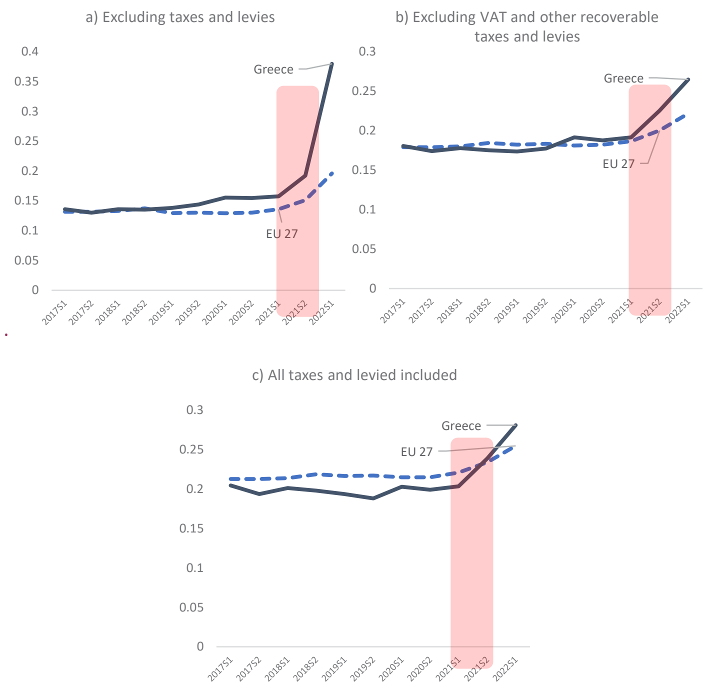


Sources: ELSTAT (2022a); authors' calculations.

6.5.1 A closer look at energy: Taxes in Greece increase *t*he cost of electricity compared to the EU average

Electricity for household consumers is more expensive in Greece compared to the EU 27 average in purchasing power standards. Greece was close to the EU 27 average during 2017–2021, however, since the second half of 2021 and prior to the Russian invasion of Ukraine, electricity prices for household consumers increased significantly. Earlier, the electricity prices in Greece pre-tax used to be a bit higher than the EU 27 average, and post-tax they used to be lower. Since the second half of 2021, electricity prices in Greece have skyrocketed pre-taxes and significantly increased after taxes, exceeding the EU 27 average for the first time since 2017 (Figure 15).

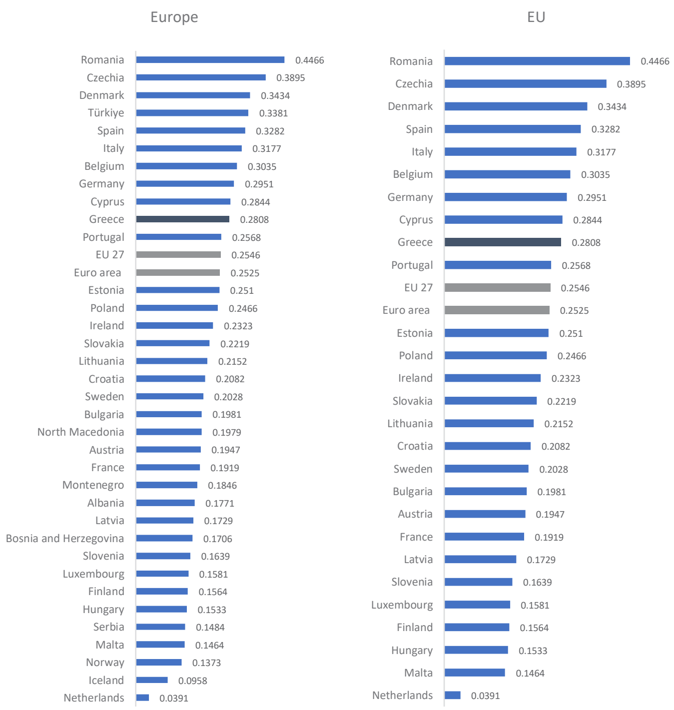
Figure 15: Electricity prices for household consumers: Bi-annual data in purchasing power standard



Sources: Eurostat (2022c).

Nowadays, Greece has the tenth most expensive electricity prices for household consumers (in purchasing power standard; taxes and levies included) among 35 European countries and it ranks ninth among the 27 EU countries (Figure 16). In both cases, electricity prices in Greece are above the EU 27 and Euro area average. Romania has the most expensive electricity and the Netherlands have the least expensive electricity prices for household consumers.

Figure 16: Electricity prices for household consumers (in purchasing power standard) among European and EU countries in 2022



Sources: Eurostat (2022c).

6.6.1 The over-regulation of lifestyle: how fair is it?

Vasilis, Giannis, and Costas are very close friends. They are single men with no children and they like to meet twice a week, have a little chat and treat themselves. Vasilis is not a big drinker but he enjoys a bottle of wine over the week. Giannis enjoys some alcohol or *ouzo* and *tsipouro* instead. Costas likes to have three–four bottles of beer twice a week and he also likes to smoke. They all like to drink coffee in the morning and have to travel to work for 30 minutes a day. They used to be content with their lifestyle until the government decided to increase the excise taxes in the aftermath of the economic crisis in Greece. The three fellows' lifestyle is not extravagant or immoral but they have to pay a heavy price for it. Every year, Vasilis, Giannis, and Costas pay €808, €1,930, and €1,744 on four sin taxes, respectively. Although they earn a lot more than the minimum wage (€713), they spend 7–15 per cent of their income on sin taxes (Vasilis is the luckiest one, see Table 1). Is it fair? Is it effective?

Table 1: Poor fellows' payments on sin taxes

	Annual expenditure on sin taxes		
	Vasilis	**Giannis**	**Costas**
Wine (1 bottle per week)	€78		
Alcohol (0.38 litres per week)		€1,000	
Beer (4 pints per week)			€57
Cigarettes (63 sticks per week)			€957
Coffee (9 coffees per week)	€80	€80	€80
Petrol (13 litres per week)	€650	€650	€650
Total	€808	€1,730	€1,744
Annual income	€12,000	€12,000	€12.000
Per cent of annual income	7%	14%	15%

Source: Authors' calculations based on various databases.

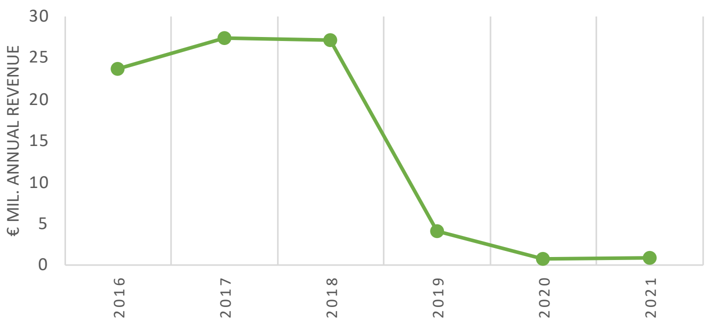
The main justification behind the government's decision to increase taxes on these products was to raise revenues that can be spent on public services to cover any possible externalities associated with these activities. Was the government right? Here is what the evidence suggests.

6.6.2 Vasilis: Wine

The tax number 13 N4346/15 was introduced with effect from 1 January 2017. The government estimated collecting €110 million per year in revenues. The imposition of the tax provoked strong reactions from the wine industry from the very first moment. Indeed, almost all of the arguments put forward at the time were borne out. Some of them were as follows: the tax was unlikely to bring in the revenue that the government had predicted, there would be an increase in smuggling and bulk wine, and the tax would eventually be abolished.[56]

The tax was abolished after three years as it brought in less than 30 per cent (€27.1 million in 2018) of the original estimate (Figure 17). At the same time, this tax introduced the concept of bootlegged wine and undeclared wine tanks. Thus, it left a legacy of illegality in a market that had not acquired the know-how of dealing with 'illegality', reducing legitimate business and, of course, leading to an indirect loss of revenue for the state.

Figure 17: Annual revenues from the excise tax on wine



Source: Independent Authority for Public Revenue (2022).

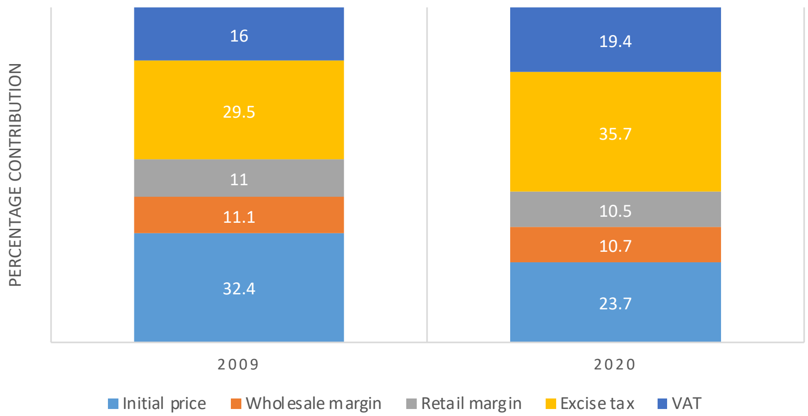
6.6.3 Giannis: Alcohol (ouzo and tsipouro)

Alcoholic beverages have been subject to eight tax increases since 1998, with four of these taking place between 2009–2010, leading to a more than doubling of the excise duty on alcoholic beverages. The excise duty increased by 95 per cent over 2009–2021 while the value added tax (VAT)

56 'The wine tax fiasco,' Capital.gr, 6 September 2018 (https://www.capital.gr/tax/3314420/to-fiasko-me-ton-foro-sto-krasi).

increased by 5 percentage points to 24 per cent. This increase has brought the share of taxes to 55.1 per cent of the final price of a typical alcoholic drink in 2020, compared to 45.5 per cent in 2009 (Figure 18) (IOVE, 2022).

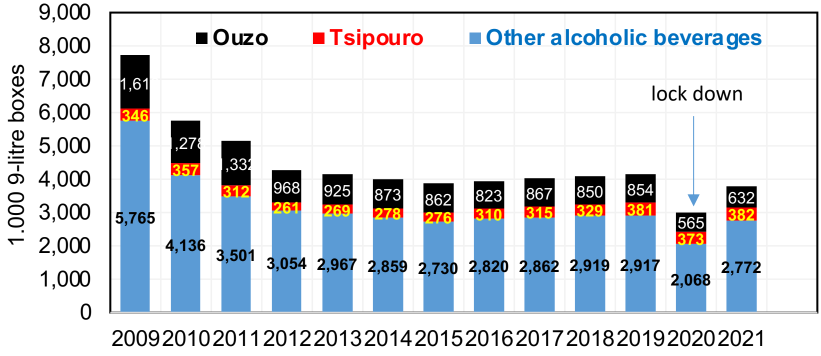
Figure 18: Composition of the final price of alcoholic beverages



Source: IOVE (2022).

Recorded sales of alcoholic beverages showed stabilising trends between 2013–2019 after the big drop in 2009–2012, which was a result of strong income reductions and the sharp escalation in the excise tax and the VAT. The pandemic in 2020 was a new test for the sector. It affected consumption – particularly, on-trade – due to the forced lockdowns in the restaurant sector and the reduction in tourism flows, creating an asymmetric impact on the sector compared to the rest of the economy.

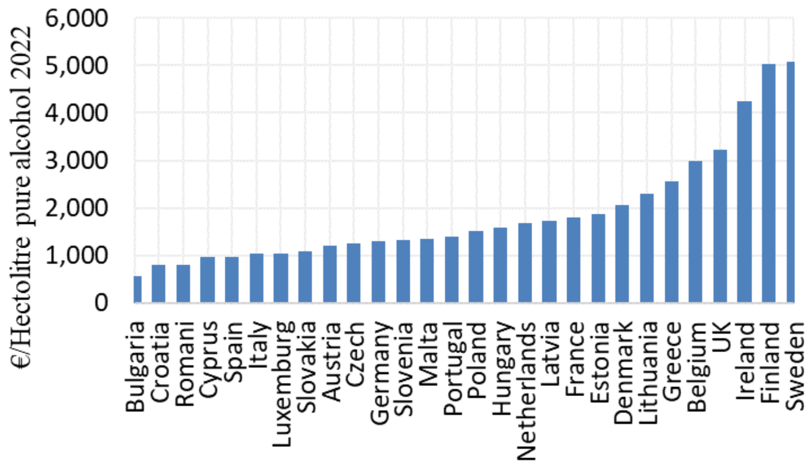
Figure 19: Sales of alcoholic beverages



Source: IOVE (2022).

Alcohol excise duty in Greece is high compared to other EU countries, based on the latest available data. However, the highest rates are usually found in northern European countries, which, for social reasons, impose high rates on alcohol (Figure 20).

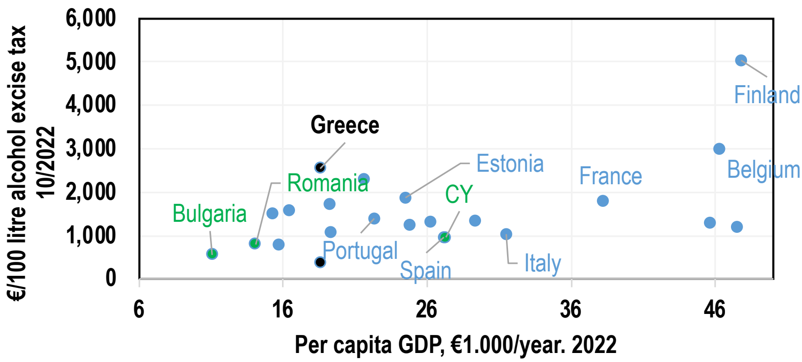
Figure 20: Excise duty per 100 litres of ethyl alcohol EU-27



Source: Eurostat (2022d).

The excise duty per 100 litres of ethyl alcohol in Greece is €1,400 higher than the average of neighbouring and tourist-competing countries (excluding Turkey, Figure 21). The high prices in Greece mean that due to the lower per capita incomes, the VAT is disproportionately borne by consumers. Similarly, in high per capita income countries, such as Finland and Sweden, the high alcohol excise duties (of €3,562 in Finland and €3,123 in Sweden) are milder compared to their nominal value (€5,035 in Finland and €4,927 in Sweden).

Figure 21: Excise duty per 100 litres of ethyl alcohol compared to per capita GDP



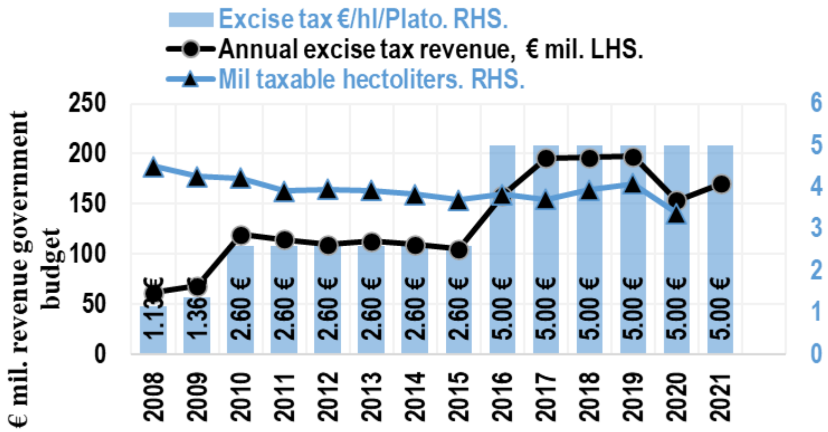
Source: Eurostat (2022d).

The increase in taxes and prices has additional negative effects, both on the domestic market – by increasing the incentives for illegal trade – and on tourism – by reducing its competitiveness. According to Sofika Papanikolaou, Director General of ENEAP (Association of Alcoholic Beverage Companies), while the state in 2019 received €291 million from the excise duty on alcoholic beverages, the estimated losses from illegal trade amounted to €31 million per year from alcoholic beverages alone (except for bulk spirits of two-day producers (*tsipouro*/*tsikoudia*) where the problem is more acute). At the same time, there are even more significant losses from VAT as, according to the experience of the industry, the main quantity of illicitly traded drinks is channelled to the local market. It is estimated that VAT losses range from €28 to €45 million per year (Papanikolaou 2022).

6.6.4 Costas: Beer and cigarettes

The 2016 increase in the VAT on beer led to an increase in revenue rather than a significant decrease in taxable volumes, unlike the 2010 increase (Figure 22). The drop in 2020 was due to the pandemic. The targets of the General Accounting Office (GAO) were achieved by the tax, although, of course, it increased the price for the consumer.

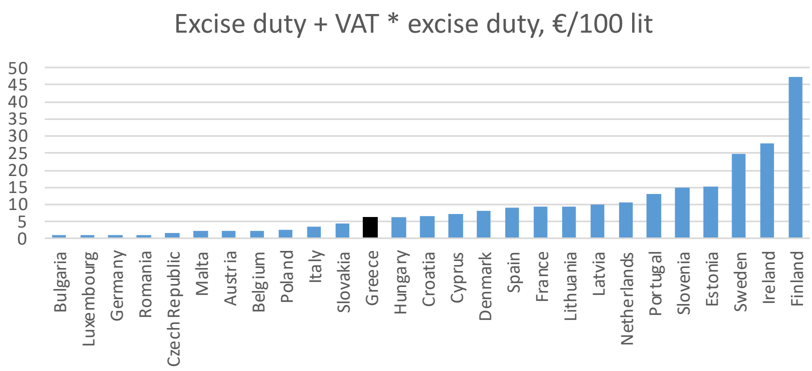
Figure 22: Excise duties and revenues on beer



Source: Independent Authority for Public Revenue (2022).

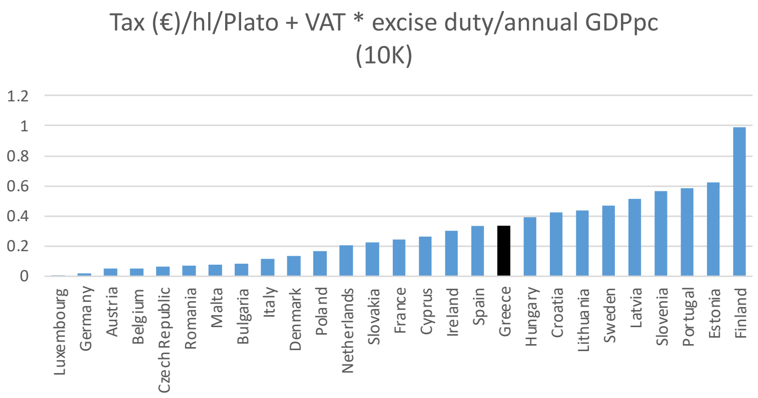
Since the excise tax is a fixed amount and the VAT is imposed comparably on its value, we calculate the total excise tax and VAT on the excise tax charge per hl/plato of beer. We can see that in Greece, the tax is not among the highest in the EU (Figure 23) but if we weigh it by GDP per capita, Greece is in the upper half of the member states (Figure 24). This may be the reason why the increase in the excise duty has been relatively 'efficient'– there has not been as large a reduction in consumption as in other cases. Another reason for this is that as a product, beer does not lend itself to smuggling, reducing the burden on small producers, who have grown significantly in recent years. Thus, what remains, in the end, is the higher price consumers have to pay, something especially onerous for lower-income households.

Figure 23: Total tax burden on beer



Source: European Commission (2022).

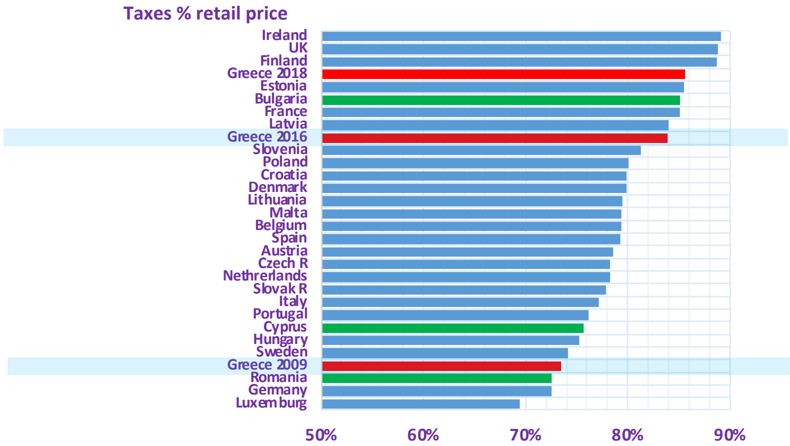
Figure 24: Total tax burden in beer relative to GDP per capita



Source: European Commission (2022)

The increase in tobacco taxation from 1 January 2017, following a series of other increases, has led Greece to have one of the highest tobacco taxes in the EU (Figure 25).

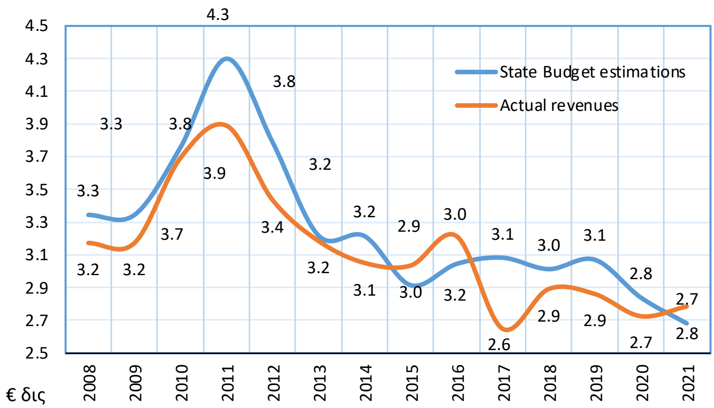
Figure 25: Tobacco taxation in the EU



Source: European Commission (2022) and KPMG (2021).

Figure 26 shows the effect of the 2016 tax increase, where the stocks, and therefore the revenues, initially increased, but then dropped off, with low revenues marking the start of 2017. It also shows the effect of the increases on revenue as legal quantities (revenue figures after GST returns) decreased. As a result, the state's revenue today is lower than when it had the lowest taxes.

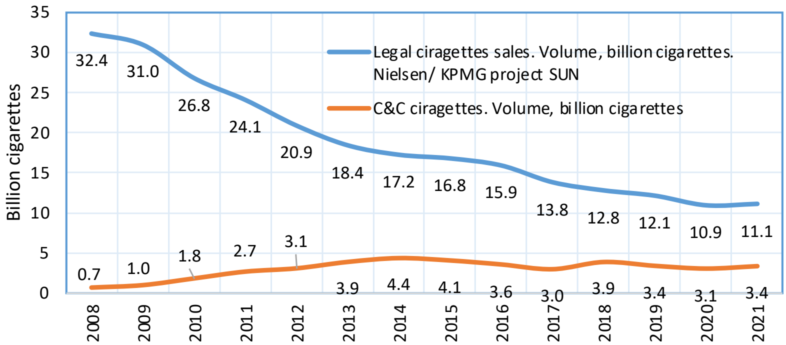
Figure 26: Estimated and actual state budget revenues



Source: Independent Authority for Public Revenue (2022).

The sharp increase in the excise tax and VAT on tobacco led to a significant drop in legal cigarette sales and the rise of counterfeit and contraband. (Figure 27).

Figure 27: Cigarette sales



Source: KPMG (2021).

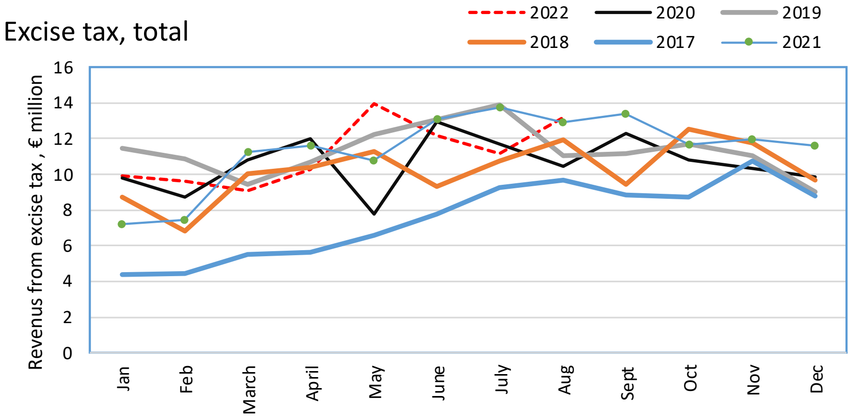
This development was brought about in the first place by the sharp increase in tax on a product that is easily smuggled, especially in a country with extensive borders that include coastlines which are difficult to guard. At the same time, it also occurred because of the decrease in income during the crisis, which resulted in the consumer turning to smuggled products instead of legal ones.

Therefore, sharp tax increases had several consequences (a) a reduction in state revenues from excise duties and VAT and, of course, a reduction in legal activity (such as employment and taxes on legal businesses), (b) a reduction in legal quantities and an increase in illegal ones, leading to safety and hygiene issues and a further burden on public health, and (c) a price increase for citizens.

6.6.5 Three fellows: Coffee and gas

In 2016, excise duty was imposed on the coffee products that were imported from third countries, originated from other EU member states, or were domestically produced. The imposition of the tax on coffee products was a purely revenue-raising measure (Figure 28).

Figure 28: Revenues from the excise tax on coffee



Source: Independent Authority for Public Revenue (2022).

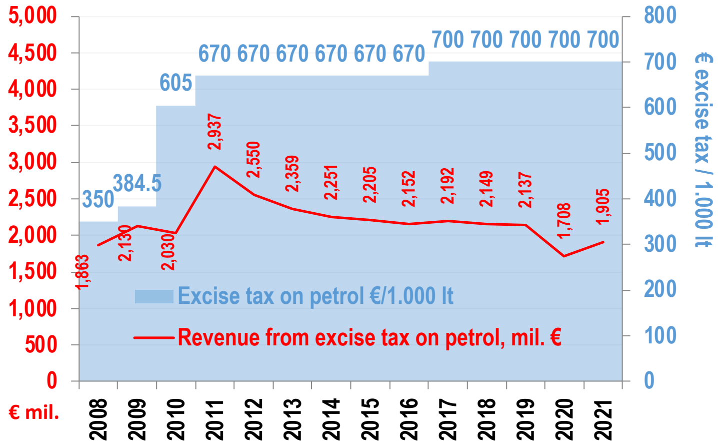
According to a recent conference in Athens,[57] coffee smuggling is reported to have reached significant proportions, with losses of at least €12 million per year from excise duty alone. According to Yannos V. Benopoulos, president of the Hellenic Coffee Association (EEK), "the largest quantities of contraband come from countries that are in the EU, which indicates problems in controls", with the specific quantities smuggled in being sold without invoices but also being moved from catering outlets without legal procedures, creating a chain which, as it 'makes money,' grows stronger at the expense of businesses in the sector that operate legitimately. The fact that Greece ranks seventeenth in the world in per capita coffee consumption with 5.4 kilos of coffee opens up the appetite of the dilettantes even more, as Greece imports annually coffee and coffee derivatives worth more than €290 million, with increasing trends (Skoufou 2021).

Regarding gas, Greece drastically increased the tax rates on liquid fuels in 2010. The increase in rates was particularly high for unleaded petrol while for diesel, taking into account its use for business purposes, the increase was more moderate. To tackle the illegal use of heating oil for motoring purposes, an equalisation of the excise duty rates for motor and heating oil was carried out in October 2012. As a result, the tax burden on the latter increased fivefold. Other changes in the taxation of fuels were subsequently made.

57 During the 1st Coffee Business Forum 2021 conference, in a discussion on 'The coffee business after the opening of the market'.

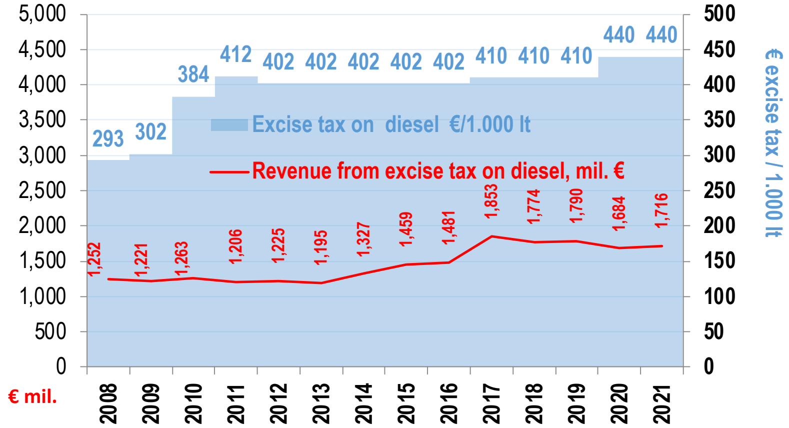
However, in all cases, the objective of the changes was revenue-raising, as it was considered that the inelasticity of fuel demand in relation to its price would generate the expected revenue as well as mitigate the impact of taxation on social welfare. However, the reduction in consumption, substitution, and, possibly, the intensity of smuggling, have cancelled the legislator's desire to increase revenues during the Greek crisis (Figures 29 and 30).

Figure 29: Excise tax and revenues on petrol



Source: Independent Authority for Public Revenue (2022).

Figure 30: Excise tax and revenues on diesel

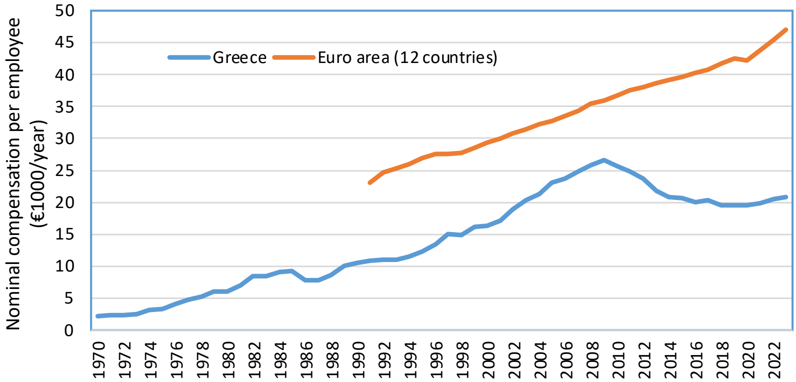


Source: Independent Authority for Public Revenue (2022).

These continuous increases have led Greece from a relatively low level of taxation in the EU in terms of excise tax and VAT (from 19 per cent in 2009 to 24 per cent today), to the top (Figure 31). The excise duty is calculated at a fixed amount per 1,000 litres: for petrol, it is €700 (or €0.7/litre), for diesel, it is €410, and for LPG it is €430. In addition, there are fees, such as the RAE counterpart fee, the petroleum products special account contribution, the special fee (for the performance of customs duties), and VAT. All of these raise the final price by more than 53 per cent of the retail price.[58] That is, a country with a relatively low income – which before the crisis accounted for more than 70 per cent of average euro area wage income and now accounts for around 50 per cent – has one of the highest taxes in absolute terms. According to Eurostat, Greece has the most expensive unleaded petrol in the Eurozone, among the highest prices for diesel fuel in the euro area, and is among the most expensive in the price of liquid fuels in the European Union as a whole.

58 'Fuel prices: How much tax do we pay on petrol?' *GoCar*, 25 May 2022 (https://www.gocar.gr/news/feed/39833,Times_kaysimwn_foro_plhrwnoyme_venzinh.html).

Figure 31: Nominal compensation per employee



Source: AMECO (2022).

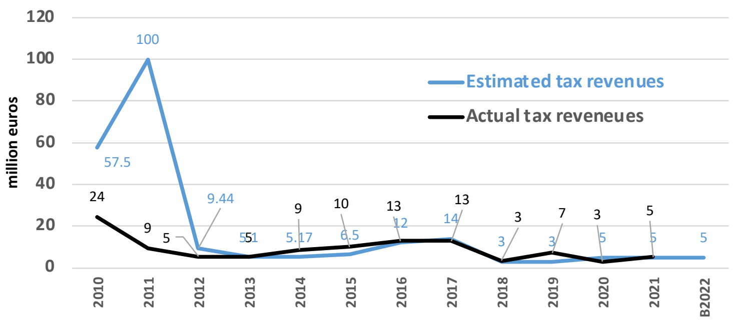
First of all, the price increase led to a loss of social welfare (either by reduction of disposable income for travel or reduction of travel) and substitution with more environmentally damaging heating methods (e.g., fireplaces). It has also had a significant impact on the value chain, as Greece had failed in earlier years to invest in combined transport (especially rail freight), logistics centres, interconnections of ports, production centres, and consumption centres. Thus, the disproportionate reliance on road freight transport means that increases in taxes on diesel fuel have not only contributed to a reduction in the overall competitiveness of the country's production base but also an increase in costs within the value chain and thus to higher prices for consumer goods.

6.7. The tax on luxury goods in Greece: A tale of a failed tax

The most obvious case of over-taxation in Greece in which the legislator's expectations proved to be completely disproportionate was the 'luxury tax' in article 17 of Law 3833/2010. This tax was introduced in the first wave of measures to deal with the crisis and applied to items such as expensive cars and jeeps, private planes, gold watches, expensive jewellery (worth more than €1,000, for those who are law-abiding), gems, luxury leather bags, and shoes. The legislature expected annual revenue of more than €100 million from this tax (according to the report of the General Accounting Office, Independent Authority for Public Revenue (2022)) in the 2011 budget but, in the end, it collected €5.17 million (2013 figures)

– that is, approximately 4.3 per cent of the annual estimated return. In recent years, after the gradual removal and widening of exemptions, its revenue amounts to about €5 million per year – 4.1 per cent of the original estimate of the GAO (Figure 32).

Figure 32: Estimated and actual tax revenues on luxury goods



Source: Independent Authority for Public Revenue (2021 and former years).

The lawmakers were then forced to repeatedly amend this absurd tax – at least fifteen times – to exempt (the apparently, according to the original legislator, 'ultra-luxury') hearses and police cages, and to specify the application of the tax in the case of skins of...fish. Under the weight of reactions from justifiably indignant Greek fur producers, the legislature subsequently exempted them from the tax on wholesale sales of goods sold as intermediate products for processing furs produced domestically. However, where the tax was retained, the legislature had to come back with at least eleven other acts to specify the application of this tax. The taxpaying citizen therefore paid for many hours of the Ministry of Finance employees, who drafted dozens of pages of circulars, regulations, and provisions specifying important issues, such as the tax exemptions for the Black Sea Trade and Development Bank and the members of its foreign staff. Indeed, the legislator even had to deal with the amendment of the relevant tax in order to exempt cars donated to the police, the fire brigade, and the coast guard.

Of course, the state never assessed the damage suffered from the imposition of the tax by, for example, the Greek jewellers. The tax is imposed on organised, law-abiding businesses, and has made it prohibitively expensive to import semi-processed jewellery and precious stones as an intermediate product for processing and re-exporting jewellery. Technical details of the application of the tax mean, in effect, that imports are favoured over domestically produced jewellery with a value over €1,000. In addition, the participation of Greek producers of jewellery in international markets is actively discouraged. This happens even though exports are exempt, and if (as is common in this business) after a wholesale export the customer returns parts of his purchase, these returns are treated as imports and are taxed. The same happens with individual sales, for example over the internet, a market in which product returns are also a common practice. Therefore, the luxury tax has resulted in material damage to this valuable segment of the Greek economy, which has an interesting value chain that includes many SMEs but also national flagship brands, directly linked with high-quality tourism.

It should be noted that the luxury tax does not exist in Greece's neighbouring countries, such as Bulgaria and Turkey; nor in Italy, which is Greece's main competitor within the EU.[59] Therefore, the state drove the relevant activity out of the country and excluded Greek companies from international value chains. For example, guides encourage passengers of cruise ships to avoid Greece for their high-value jewellery purchases. Additionally, the state did not assess the man-hours lost by exempting tourists from the tax on luxury goods purchased in Greece.

6.8 Conclusion: Are government policies sufficient to tackle inflation?

Although the roots of the recent increase in the cost of living are not endogenous in Greece, or any other European country, the market shortages and the higher prices are also a result of chronic economic weaknesses, after a decade of a severe economic crisis. The current government has introduced a series of measures to counter inflation's

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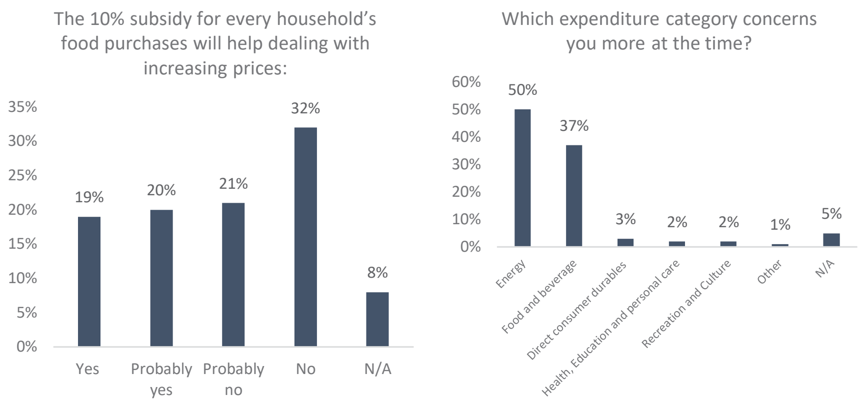
59 The method of application of the luxury tax is particularly burdensome for the Greek producer, who is required to pay the tax calculated at a higher value (wholesale or retail) than the corresponding importer. For importers, the luxury tax is calculated and paid at the purchase price of the product (with a value of more than €1,000), regardless of whether it is intended for wholesale or retail sale. On the other hand, for the producer, it is calculated on the value of the supply as follows: (a) for a wholesale value by the producer of more than €1,000 (before VAT) per unit, a luxury tax of 10 per cent is charged and (b) for retail sales, 30 per cent is deducted from the sales value VAT excluded, and on the remaining amount (if it exceeds €1,000), VAT of 10 per cent is calculated. Thus, the Greek-produced product becomes uncompetitive and even more expensive to the consumer, due to the additional charge of the luxury tax, which is much higher than on imported products.

burden. In addition to measures such as electricity and natural gas subsidies and price controls for the household's shopping basket (for 50 basic goods),[60] the Greek Prime Minister announced a 10 per cent subsidy for every household's food purchases for the next six months (totalling €650 million; to be financed through an exceptional levy on refinery profits), to alleviate citizens from the rising cost of living. However, to the extent that inflation is always and everywhere a monetary phenomenon, the currently implemented policies seem to be feeding inflation, instead of taming it.

Despite the communication appeal the government may have expected from the recent measures, citizens seem to disagree (53 per cent) that the 10 per cent subsidy for every household's food purchases will help deal with increasing prices, according to the most recent nationwide survey.[61] Also, the vast majority of Greeks worry about the rising prices of energy (50 per cent), and then the food and beverage expenditure category (Figure 33).

Figure 33: Nationwide survey on inflation, 18–19 December 2022.



60 'Gov't releases proposed items with zero or low price hikes,' *Ekathimerini*, 11 October 2022 (https://www.ekathimerini.com/economy/1195394/govt-releases-proposed-items-for-shopping-basket-with-zero-or-low-price-hikes/).

61 Notes: Sample of 1103 adults, 95 per cent Confidence intervals and +/- 3 per cent standard error. Source: PULSE RC (https://www.avgi.gr/sites/default/files/2022-12/dimoskopisi.pdf).

6.8.1 Some alternative policy recommendations which could tackle the rising cost of living are:

- Accelerate growth and enhance reforms that can also reduce the cost of producing goods and providing services in the country. These reforms include business licensing, an area in which significant reforms have already been implemented but which needs to be supported by further reforms and better implementation.
- Reduce taxes that increase costs, including taxes on communications (an important reduction for young customers was recently implemented) and energy (which feeds through transport and electricity production into the value chain).
- Accelerate the licensing of energy production through renewables as well as their connection to an upgraded grid (important upgrades to the grid are planned through the RRF, while in the area of renewables licensing, a streamlining of ongoing reforms and policies is needed to achieve the desired results).
- Reduce the tax wedge on labour through a further reduction in social security contributions (which will benefit lower-income households in particular) and a reduction in the progressivity of income tax that will make the country more attractive to high-skilled labour.
- In addition, the country can significantly improve (and at a reasonable fiscal cost) the tax benefits offered to single-parent families with children, as it currently has one of the least generous schemes in the OECD. A tax benefit for families caring for elderly members could also be discussed.
- Reducing the tax wedge on labour and offering such targeted tax breaks would also help the country depart from the current position of an ineffective redistribution/high-tax economy.

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Chapter 7
Czech rising cost of living

By Martin Pánek

- The Czech economy has seen the highest inflation in 2022 since 'transformation inflation' was reined in back in the mid-1990s.
- In this chapter, we analyse a number of inefficient regulations that raise the prices somewhat artificially in four sectors: (i) childcare, (ii) housing, (iii) restaurants and services, and (iv) waste regulations. To these we are adding a is a fifth sector, where the main regulation in the Czech Republic's case is excise taxes – (v) the 'sin' sector – that is, alcohol and tobacco.
- By lowering regulatory requirements for childcare facilities, the government could save young parents €83 a month if their child attends private childcare. With better management of childcare capacities, the government could save young parents at least €288 by giving them the opportunity to transfer their child to a public childcare facility..
- Difficult-to-obtain construction permits and harsh zoning regulations are the main culprits behind the rapid increase in Czech housing prices, and control of this is entirely in the hands of the government. Between 2017 and 2022, housing prices in the EU have grown by 37 per cent. In the Czech Republic, the growth has been more than twice as fast.
- A direct saving of €2,790 per year is available for a medium-sized restaurant if music, TV, and radio license fees are abolished. Furthermore, to lower consumer prices, the government could lower the VAT rates.
- In a small four-person business, it takes almost six weeks of one employee's labour – or in other words €1,587 of wages – to fill out

the necessary paperwork for and administer tasks mandated by the government.

- The government earns €364 in excise taxes and €165 in VAT from an average Czech's alcohol and cigarette consumption every year.

7.1. Childcare

Childcare facilities in the Czech Republic are provided by two distinct sectors – the government sector and the private sector – which are very dissimilar in nature.

7.1.1 public childcare

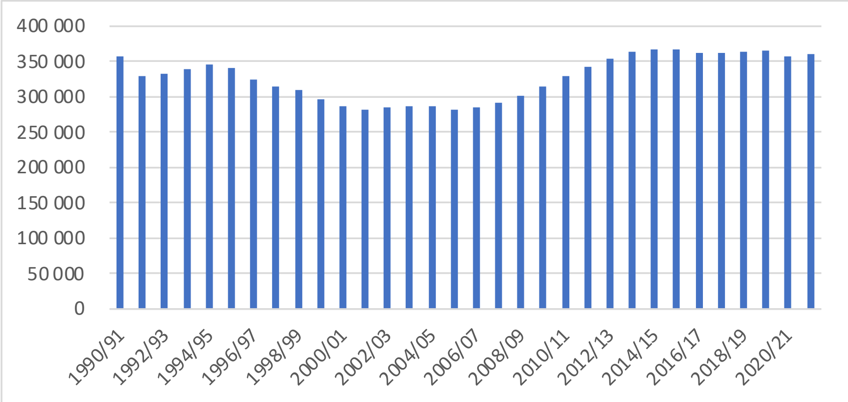
The publicly run childcare facilities are very affordable, but they do not have sufficient capacity, which forces parents to look for private alternatives. Although these facilities are much more expensive, new parents do not have any reasonable alternative.

Because the number of children born in a given year is known (see Figure 1), the government could plan efficiently to set up the required number of childcare services. Although the duration for which parents would like to keep their children at home varies,[62] it should be easy to arrive at a reasonable estimate of the number of children who will be placed in childcare and at what age (Hamplová and Šalamounová 2015: 5).[63] We studied whether deregulation or better regulation could help ease the situation.

62 It is overwhelmingly mothers who stay at home with their children. 'Jen dvě procenta českých otců využívá rodičovskou dovolenou. Většina mužů si přitom myslí, že by měli,' *iRozhlas*, 7 August 2021 (https://www.irozhlas.cz/zpravy-domov/cesti-muzi-otcove-rodicovska-dovolena_2108072055_piv).

63 Exact statistics are hard to come by, but for a general idea, see Hamplová and Šalamounová (2015: 5, table 2).

Figure 1: Number of children in childcare facilities in the Czech Republic



Source: ČSÚ (2022a), own chart.

The average gross wage for an employee is Kč49,221 (€2,017), and although there is no aggregate data available, multiple sources agree that the maximum fees for childcare in Prague are around Kč1,000 (€40) per month for one child. This constitutes about a day's net wage. For example, two Prague childcare facilities selected as the best ones in two different contests charged Kč923 (€37) and Kč1,000 (€41) for the current school year.[64]

If a good or service is priced as artificially low as the Czech government childcare, it follows that the quantity demanded will be inefficiently high. The situation is exacerbated by the fact that childcare is mandatory for the final preschool year – that is, when the child is five years of age. Making matters worse, some parents ask for a one-year delay in their child's obligatory entry into school, in which case the child is required to be in childcare again.

64 'Platby', *Mateřská* škola *Podbělohorská*, 2022 (https://www.msklamovka.cz/platby/) and 'Platby', *Mateřská* škola *Dráček*, 2022 (https://www.mskytlicka.cz/platby/). The sources for this selection are 'Žebříčky', *Top* školky, 2022 (https://www.topskolky.cz/zebricky) and 'Žebříček mateřských škol za školní rok 2014–2015 podle krajů', *Nej* školky, 2015 (https://www.nejskolky.cz/prakticke-informace/zebricek-materskych-skol-za-skolni-rok-2014-2015-podle-kraju/).

This scenario results in a 6 per cent rejection rate (ČŠI 2021: 18). The system is also handicapped by the fact that parents can apply to multiple childcare facilities and are under no obligation to withdraw the remaining applications if their child has already been accepted by another childcare facility.[65] There are easy ways to mitigate this problem – for example, by a mandatory deposit with every application that the parents lose if their child does not attend the childcare facility.

Service and food at the government-run childcare are generally of substandard quality. These childcare facilities are aware that the parents are captive because other public childcare facilities are at capacity and the private alternatives are expensive (see below for a discussion of their pricing). The food is charged at an extra rate and costs Kč30–50 (€1–2) a day; it is very often of such poor quality that children remember the bad experience well into adulthood.[66] There is typically no way for parents to pay more money to receive better service or alternative food for diet-restricted children.

Further exacerbating the problem of capacity, public childcare facilities are filled at the beginning of the school year. However, the vast majority of children are not born anywhere close to the beginning of September. The mothers (or, exceedingly rarely, the fathers, see footnote 1) stay at home on government benefits for between two and four years. Although they can time their parental leave to coincide with the beginning of the school year, many mothers (41.1 per cent) opt for 36 months of leave because this corresponds to the period after which an employer is obligated to re-employ them (Hamplová and Šalamounová 2015: 5). Thus, for example, if the 36-month term ends in January, the mother has virtually no chance of enrolling her child in public childcare.

Let us now look at the private alternatives. These institutions face problems with housing supply and regulations (more on this in a later section Housing) and with hygiene regulations, which prescribe exactly how many square

65 Some childcare facilities push to know, but sources tend to agree that the rejection rate of applications exceeds the rejection rate of children. The rejection rate of applications is around 25 per cent. ‘Hledají školku pro své děti, nakonec ale pohoří. Řada žen proto například zůstává na mateřské dovolené, ačkoli by už chtěly chodit do práce’, 13 February 2022 (https://www.lidovky.cz/domov/materska-skola-skolka-dovolena-rodice-problem-odmitnuti.A220213_133540_ln_domov_lros).

66 ‘České školky: soukromé předražené, státní neberou’, *Lidovky*, 11 April 2012 (https://www.lidovky.cz/relax/skolky-v-cesku-soukrome-predrazene-statni-neberou.A120410_122849_vztahy_glu).

metres of living space, at a minimum, each child needs; the total area of the childcare facility; and the locker room size; they also lay down norms regarding food service and more.[67] It is, therefore, not entirely surprising that childcare (public or private) often fail to live up to these detailed requirements when inspected. Fines were given for insufficient lighting, ventilation, heating, cleaning, or food. [68]

7.1.2 Private childcare

Private childcare facilities in Prague charge anywhere from Kč7,000–20,000 (€288–822), not including food. The priciest ones usually use a foreign language as the mode of communication, which allows the child to be immersed in the language from an early age. However, the difference in quality between the best public childcare facilities and the cheapest private childcare facilities is not significant enough to explain fees that are seven times higher. Parents complain that these fees are so high that the mother's take-home pay is barely enough to cover the expenses. It should also be kept in mind that young children fall ill very often and have to spend several weeks in a year at home, which usually means that their mothers have to forgo their work and the associated income.

The crowdsourced website Numbeo indicates that Czech private childcare costs US$383.91 a month on average. By way of comparison, in South Korea, childcare costs US$339.63,[69] and though not by much, South Korea's GDP per capita (PPP) is slightly higher than that of the Czech Republic. According to International Monetary Fund (IMF) data, South Korea's GDP per capita is US$53,574, whereas that of the Czech Republic is US$48,919 (IMF 2022). If we were to account for this difference and reduce the price of Korean childcare accordingly, we would end up with an amount of US$310.12 for Korean private childcare, which is a price difference of almost US$83.

We used Korea for comparison (though Korean childcare look very different from Czech childcare) because although it is far away geographically, it has a liberal market democracy similar to that of the Czech Republic. Korean authors Ahna and Shin (2013: 2) describe

67 The relevant law is 'Vyhláška č. 410/2005 Sb'.

68 'Hygienici se zaměřili na školky. Pokuty padaly i za jídlo', *Pražský deník*, 4 July 2018 (https://prazsky.denik.cz/zpravy_region/hygienici-se-zamerili-na-skolky-pokuty-padaly-i-za-jidlo-20180704.html).

69 Prices as on 3 November 2022.

childcare centres in Korea as follows:

> The most notable feature of the Korean care arrangement system is that family child care homes do not exist; as a substitute, we have home child care centers in Korea. A home child care center is officially licensed as a type of center for a small number of children (five to 20 children), although it is based on home settings mostly at a house or an apartment unit as the name indicates.

These facilities account for a significant proportion of childcare centres in Korea: two thirds for children less than a year old and one fourth for children between two and three years old (Ahna and Shin 2013).

Although Czech families may object to having their children in spaces as narrow as an apartment unit as described in the citation above, in public policy reform, we do not need to go all the way from one extreme to another to enact change. Modest reforms often go a long way towards enhancing efficiency. In this case, marginal liberalisation of spatial norms would have profound effects on increasing the number of childcare facilities. Building a new childcare facility takes about five years,[70] which is inconveniently long.

Exact data for this sector of the economy is hard to come by, but we have demonstrated that regulatory inefficiencies lead to sub-optimal welfare.

Policy recommendations: Some reforms are easy (incentivising parents to withdraw applications in time); others may seem easy but face hurdles of inefficiency on the part of government planners (such as ensuring enough slots each year for the relevant age), and still others are quite challenging (such the need to lower the regulatory burdens). Still, there is room for improvement that would benefit young parents and their children.

Takeaway: By lowering regulatory requirements for childcare facilities, the government could save young parents €83 a month if their child attends private childcare. With better management of childcare facilities, the government could save young parents at least €288 by giving them the opportunity to transfer their child to public childcare.

70 '"Už ho nepřijmeme." Nedostatek míst ve školkách nesouvisí s Ukrajinci, problém je jinde', 21 July 2022 (https://www.heroine.cz/zena-a-svet/9051-uz-ho-neprijmeme-nedostatek-mist-ve-skolkach-nesouvisi-s-ukrajinci-problem-je-jinde).

7.2 Housing

The high demand for housing in cities is a result of urbanisation – that is, people moving to cities from rural areas. In the Czech Republic, the population of Prague was growing even in the pandemic year of 2020. Urbanisation here is clearly ongoing and will probably last at least until a major technological innovation comes along that permanently changes our behaviour, including the requirement of commuting daily to work – for example, fully autonomous cars which would lower the burden of commuting, a significant increase in working from home, and better connectivity in rural settlements.

However, even these innovations are unlikely to outweigh the fact that, worldwide, cities have always provided better economic, social, cultural, and other benefits over the long term (Ritchie and Roser 2019). Prague is no exception, and the total population has risen by 10 per cent in the past 20 years (ČSÚ 2021a).

However, in the core of the city, officially known as Prague 1, the reverse has been happening. Its population has been consistently decreasing almost every year in recent decades. The reasons for this include price caps on rents, which lasted until 1995 for new lease contracts and until 2012 for existing leases. These caps were responsible for major distortions in the housing market, including:

- lower returns for property owners, lower investment in the housing stock, and black market in rates;
- repurposing of residential spaces into non-residential spaces (saturating the low supply and high demand for office and commercial spaces, which provided higher yields);
- petrification of the historic centre of Prague (the drive to preserve the city's cultural heritage made the centre of Prague a tourist destination, providing a range of services for foreign tourists but with sharply reduced availability of common services); and
- inefficient management of urban flats by individual city districts (about 2,000 municipal flats were empty in 2019).[71]

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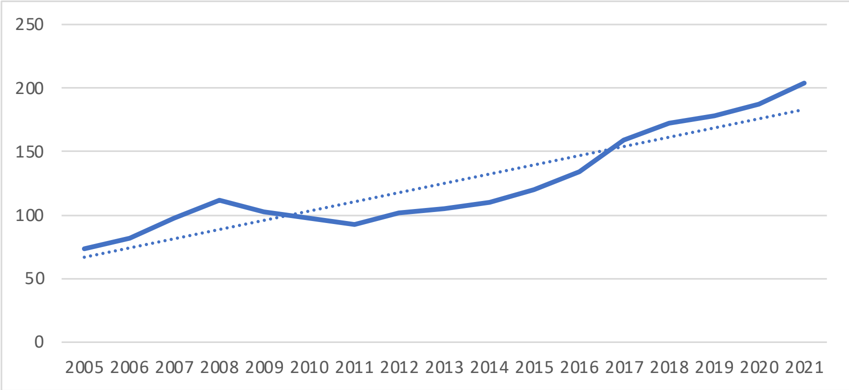
71 'Prázdné obecní byty v Praze: Ze dvou tisíc je k bydlení vhodná jen desetina', *Pražský deník*, 13 May 2019 (https://prazsky.denik.cz/zpravy_region/prazdne-obecni-byty-v-praze-ze-dvou-tisic-je-k-bydleni-vhodna-jen-desetina-20190513.html).

Buying prices for flats in Prague have been rising, and not even the COVID-19 pandemic was able to reverse this trend, as Figure 2 shows.

Figure 2: Offering prices of flats in Prague (2010 value set equal to 100)



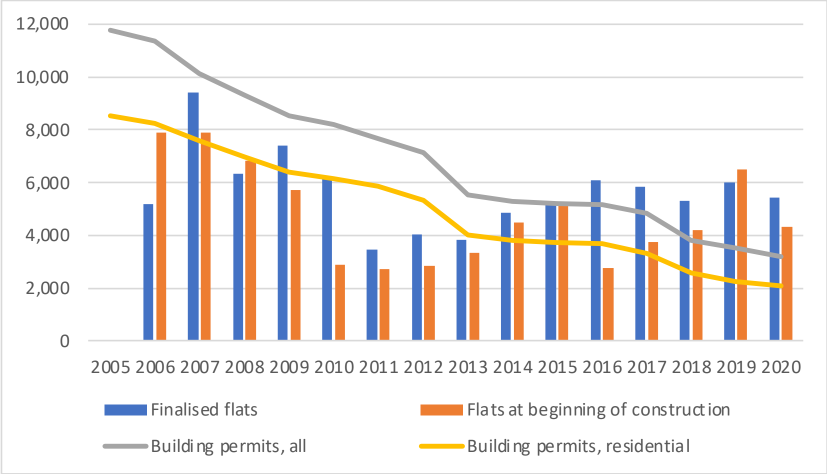
Source: (ČSÚ 2021b), own chart.

Figure 2 illustrates the significant growth in average prices of flats over the period 2005–2021. It should be noted that the rate of increase in prices is more for flats closer to the centre.

Figure 3 provides a clear picture of the scenario. It can be seen that the number of building permits for residential buildings has fallen to a quarter in the past fifteen years. The highest number of completed flats in Prague was 9,442 in 2007 followed by 7,397 in 2009. Since then, the number of completed flats in the capital has not come even close to these figures, at best hitting the 6,000 mark in 2016 and 2019. The supply side cannot be blamed for this because developers are aware of the high demand and have sufficient resources to invest in many more housing projects.[72]

72 The market on the supply side is very competitive. Therefore, arguments about cartel agreements and deliberate slowing down of construction by developers, which appear in the public debate, do not hold water.

Figure 3: Development of the housing situation in Prague



Source: (ČSÚ 2021c), own chart.

The structure of demand has also been changing: people now live longer, marry later, demand more living space, and have high expectations for housing quality.

It is evident that the number of building permits issued does not keep up with the demands arising from trends in lifestyle and migration, which inevitably lead to higher prices. From the economics point of view, there is no reason for the decrease in supply (i.e., building permits). It is not as if Prague has run out of land: there are enough brownfield sites available,[73] and permits could also be issued for taller buildings or for adding stories on existing buildings.

A negative effect of regulatory barriers is that there is a time delay between supply and demand – that is, it is not possible to react quickly to the shortage in housing by adding to the quantity supplied to the market. According to the Ministry of Regional Development, the average duration of construction in the Czech Republic is five and a half years in the capital

73 'S nedostatkem bytů mohou pomoci projekty na brownfieldech. Člověk žijící v centru je pro Prahu levnější', *Lidovky*, 18 April 2021 (https://www.lidovky.cz/byznys/pomohou-brownfieldy-snizit-nedostatek-bytu-v-praze.A210416_155802_ln_ekonomika_tesa).

city,[74] and significantly longer periods are no exception. This not only makes project planning (especially construction financing, which entails higher costs) fundamentally more difficult, but also makes it impossible to respond in a flexible manner to the market situation.

The international consulting company Jones Lang LaSalle compared construction scenarios in the main cities of the Visegrád countries.[75] The situation is very unflattering for the Czech Republic – Prague offers developers the highest yield measured by price per square metre, yet the number of flats being built there is the lowest. This leads to the least affordable housing (measured as a multiple of the average wage needed to buy a reference apartment) – it takes 147 months of average wages to buy a flat in Prague, as opposed to 92 in Budapest.

7.2.1 Repurposing of offices (back) into flats

In the 1990s, the entrepreneurial frenzy in the post-communist economy had to cope with an infrastructure that was totally inadequate compared to what is common in Western market economies. One of the problems was the lack of office space for businesses.

Most of the business office spaces were occupied by state institutions (or their successors), and a supply of commercial real estate was lacking. Therefore, many owners of residential properties repurposed their flats into non-residential premises, which yielded significantly higher rents than residential properties (recall that leases were subject to price-capped rents). The demand for flats was tepid because of low purchasing power, difficulties in obtaining loans for home purchases, and restrictions on sales to foreigners. From an economics point of view, it made sense that a significant part of Prague's housing stock was siphoned off into the non-residential segment.

But the market situation is different now. According to Jones Lang LaSalle data, between 2011 and 2020, approximately 133,500 square metres of office space were added in Prague each year; most of this was high-class

74 'Stavební povolení do 30 dní? O nový zákon se vede politická bitva', *Deník*, 5 May 2021 (https://www.denik.cz/ekonomika/stavebni-povoleni-novy-zakon-20210504.html).

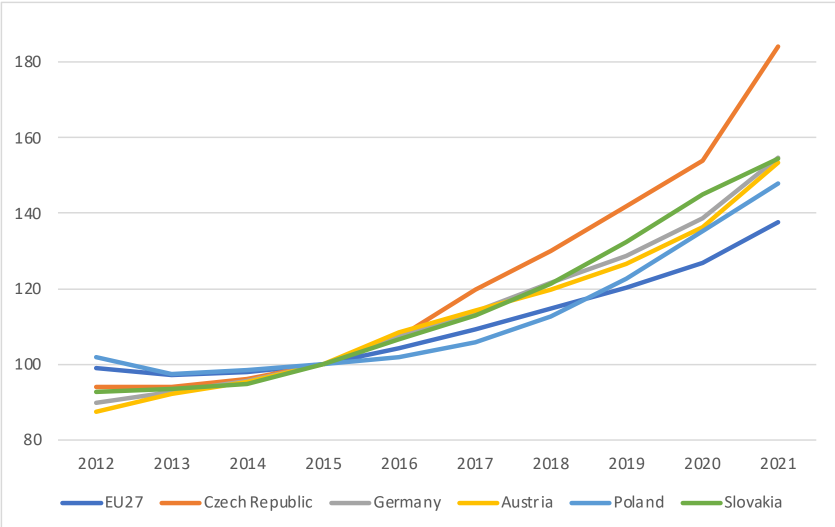
75 'Nejhůře dostupné bydlení ve střední Evropě je v Praze. Může za to nedostatečná nabídka zaostávající za poptávkou', *Roklen24*, 27 May 2021 (https://roklen24.cz/prave-se-stalo/nejhure-dostupne-bydleni-ve-stredni-evrope-je-v-praze-muze-za-to-nedostatecna-nabidka-zaostavajici-za-poptavkou/).

space and included a reception, automatic heating and air conditioning, fast lifts, parking, and other services for tenants. However, in recent times, many companies are planning to significantly reduce office space because working from home during the COVID-19 pandemic has been relatively successful – most employees see it as a welcome benefit.

7.2.2 Comparison to other countries

The rise in real estate prices is undoubtedly not a phenomenon observed only in the Czech Republic. As we can see in Figure 4, the average housing price in the EU27 has risen by about 37 per cent since 2015. However, the Czech Republic has seen the fastest growth among the selected countries, with prices increasing by more than 80 per cent. Given that Eurostat data is consistent in its methodology across countries, the main reason for this increase is again the distortion in the interaction between supply and demand.

Figure 4: House price index and its evolution (2015 value set equal to 100)



Source: Eurostat (2022), own chart.

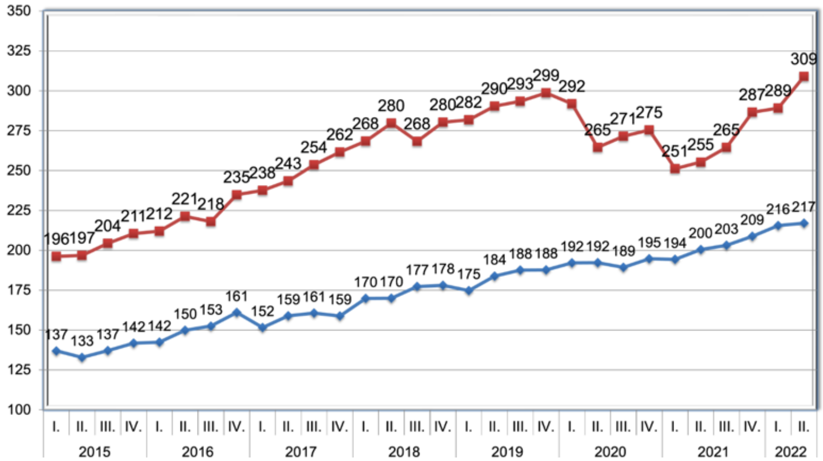
How this translates to absolute amounts in Czech korunas is more difficult to assess because the prices of houses differ greatly by their size, age, location, and other factors. However, according to ČSÚ (2020), the price at the 50th percentile for an average-sized house in the whole country was Kč2,295 (€95) per cubic metre in 2019 (new data will be available in 2024). An average-sized house was 801 cubic metres and cost Kč1.84 million (€75,700). Should the rise in prices continue at the same pace, this house will cost Kč3.6 million (€148,000) in 2029. If we believe that it is reasonable to limit the price growth to the EU average growth, then the house should instead cost Kč2.6 million (€107,000), saving the homebuyer Kč1 million (€41,000), which could be spent on renovations, furniture, or a new car.

The COVID-19 pandemic was, or appeared to be, an important factor in the change in housing prices. According to some estimates,[76] the pandemic and the economic recession that ensued should have cooled the housing market – if there was to be a bubble in the housing market, it was COVID-19 that was poised to burst it. However, this did not happen in either the for-sale or rental markets.

The impact of the pandemic on rental prices (as Figure 5 shows) was only temporary. The short-term decline in rental prices in Prague reached a local low in the spring of 2021, after which the average rental prices started rising again. In the rest of the country, the pandemic barely had any effect on the rental prices.

76 ‘Pandemie ochlazuje trh s byty. Ceny spadnou v neatraktivních lokalitách, růst se vrátí až za několik let’, *Hospodářské noviny*, 11 May 2020 (https://archiv.hn.cz/c1-66761990-pandemie-ochlazuje-trh-s-byty-ceny-spadnou-v-neatraktivnich-lokalitach-rust-se-vrati-az-za-nekolik-let).

Figure 5: Mean rental price (Kč/month) for 1 square metre – Prague (red) and the rest of the Czech Republic (blue)



Source: *Toplak.cz*.

With housing prices continuing to grow unabated, there is not much Czech residents can do without government intervention. Short-term rental services such as Airbnb could, in theory, be a mitigating factor, but this argument only applies to Prague and a handful of other popular tourist destinations, and although it is not banned, the requirements for hosts are so burdensome that small hosts are regulated and priced off the market.

With each municipality having zoning rights,[77] we need bold land-use reforms and an overhaul of the permissions process. We cannot allow the status quo to continue, because Czechs overpay on their homes significantly compared to residents of neighbouring countries.

7.2.3 **Policy recommendations:** Difficult-to-obtain construction permits and harsh zoning regulations are the main culprits behind the rapid increase in housing prices in the Czech Republic. Both these phenomena are entirely in the hands of the government. There are steps the government and municipalities can take to mitigate the problem:

77 The Czech Republic is very decentralised in this regard, having more than 6,000 municipalities with elected representation.

- Repair/privatise unused municipal flats.
- Speed up building permits.
- Promote efficient use of brownfields and other unused spaces in the wider city centre.
- Allow a higher density of buildings and buildings with more stories.
- Incentivise and enable repurposing of offices into flats.

7.2.4 **Takeaway:** In the past five years 2017–2022, housing prices in the EU have grown by almost 40 per cent. In the Czech Republic, the growth has been more than twice as fast. An average-sized home would cost €41,000 less if the growth in prices was limited to the average EU growth rate.

7.3 Restaurants and services

The simplest explanation for the high price of services in the EU is the application of the value-added tax (VAT). This is an area in which both the EU and the member states have been quite active – the EU sets the rules and the member states set the exact VAT rates.

According to Annex III of the EU VAT Directive, both ‘accommodation provided in hotels and similar establishments’ (para 12) and ‘restaurant and catering services’ (para 12a) are eligible for reduced rates (EU 2022).

The EU sets the standard rate at a minimum of 15 per cent and the reduced rate at a minimum of 5 per cent. However, if the goal of the EU is to actually reduce VAT disparities, it should (also) set maximum rates. Figure 6 shows how the Czech Republic compares with other countries as regards VAT.

Figure 6: VAT rates in the Czech Republic and in the EU (per cent)

	EU median (mean)	Czech Republic
Standard rate	21 (21.52)	21
Reduced rate I	10 (11.37)[78]	15
Reduced rate II	6 (7.61)[79]	10
Effective rate	12 (12.17)[80]	12.6

As we can see, the reduces rates and the effective rate are higher for the Czech Republic than the EU average – Czechs are taxed by the VAT more heavily than the average EU citizen, especially where reduced rates apply, such as in restaurants and hotels.

An ongoing situation showcases the inefficiency of the system's complexity, or perhaps a VAT loophole, related to fast food orders. According to news reports, McDonald's is now lobbying the government to decrease VAT rates for deliveries from 15 to 10 per cent – the latter applies when food is consumed in a McDonald's outlet. The industry standard is to have the same prices for deliveries, takeaways, and dine-in orders. But the VAT rates are not the same, and therefore, McDonald's profit margins are lower for food deliveries via an online order – for example, through Bolt Food or a similar app.[81] It is worth noting that until recently, the situation was the exact reverse (Řepková 2020). There exist several confusing situations that decide which VAT rate applies for the sale of beer, depending whether it is bottled or draught, with service or without and more.[82]

78 It is 12 (11.58) per cent if we only calculate among the countries where these reduced rates exist. There is no reduced rate in Denmark, with its single VAT rate of 25 per cent, and there is no second reduced rate in one-third of the member states. If we include the higher rates where no reduced rates exist, we get rates as stated in Figure 6.

79 It is 6 (6.94) per cent, with the same caveat as above.

80 (European Commission 2021), p. 20, last data available is for 2019. We are not including the UK in our calculations here.

81 'Restaurace tlačí na daňové zvýhodnění jídla s sebou. V čele iniciativy je McDonald's', *Aktuálně*, 19 May 2022 (https://zpravy.aktualne.cz/ekonomika/mcdonalds-chce-snizit-dph-u-jidla-s-sebou-prichazime-o-trzby/r~86865550d51611ec9ae20cc47ab5f122/).

82 'Konec mýtů o nové sazbě DPH na točené pivo', *Daně Bílý*, 2020 (https://www.dane-bily.cz/sazba-dph-pivo/).

Successive governments have relied on VAT to prop up their budgets. The VAT constitutes about a fifth of the government's revenue (MFČR 2022: 18), but its share in taxation revenue has risen steadily and is now more than 50 per cent (Finanční správa 2021). The second largest tax – corporation tax – brings in less than 23 per cent of taxation revenue to the government's coffers. This does not include excise taxes that bring in almost exactly half of what the VAT brings.

It is becoming ever more difficult for the government to lower the VAT rates without upsetting the fiscal situation. However, there is significant room for lowering the VAT should the government be inclined to do so. Throughout the 1990s, when the budget was more or less balanced, the VAT rates were 23 per cent in 1993–1994 and 22 per cent thereafter, with the reduced rate at a seemingly hard-to-believe rate of 5 per cent. This rate lasted until 2008, after which it slowly crept up to finally reach 15 per cent in 2013. Two years later, the second reduced rate of 10 per cent was introduced.

If the budget was well balanced with a VAT rate of 5 per cent, there would be room for fiscal improvement with room to lower VAT rates. We could at least abolish the 15 per cent rate and have the 10 per cent rate as a single reduced rate. While potentially reducing prices by 4.35 per cent, the empirical literature suggests that VAT cuts are passed on to consumers at only half the rate, implying a reduction in price of about 2 per cent wherever applicable (Kosonen 2015). The estimated loss in revenue for the government from this policy change is Kč40 billion (€1.64 billion),[83] which equals 12.3 per cent of the 2022 VAT revenue or 2.5 per cent of the 2022 total revenue. It is important to note that this money does not 'disappear', as some politicians might think – it is just spent by the consumers, and not by the government.

Thus, if the 'middle' VAT rate was abolished, it would amount to an annual savings of Kč3,800 (€156) per resident.

One peculiar feature in the Czech Republic is that all businesses that that invite patrons into their premises have an obligation to pay money to 'copyright collectives' for playing music in their establishments. Owners have to pay dues to these copyright collectives, irrespective of how many

83 Estimation is based on private correspondence with Ministry of Finance officials.

patrons actually listen to the songs.[84] It also does not matter whether they play songs by a foreign interpreter, a long-dead one, or a living Czech one whom they might be representing.

On the main copyright collective OSA's website, one can obtain an estimate of how much a business has to pay. Not very far from the Liberální Institut's office in downtown Prague, there is a craft beer pub for which we simulated the calculations. The inputs are as follows: three TVs for each of its rooms, one radio, and ten loudspeakers. This results in a fee of Kč62,273.26 (about €2,550) for the whole of 2022. Although it is probably not a make-or-break sum for a pub in the centre of the nation's capital, it is not insignificant.[85]

The fees get more prohibitive for establishments with fewer patrons, such as small gyms in medium-sized towns, where it is often the case that the owner runs them more as a hobby and less as a business. In such cases, the fees can wipe out the entire profit margin.

Restaurants are further burdened by obligations to pay for waste, as we will discuss in the next section, and to report in minute detail every import of animal products (even intra-EU imports).

7.3.1 **Policy recommendations:** The government should lower and simplify the VAT and abolish the license fees.

7.3.2 **Takeaway:** A direct saving of €2,790 a year is available for a medium-sized restaurant if the license fees were to be abolished. Furthermore, to lower prices for the consumers, the government could lower the VAT rates. There can be an annual saving of €156 per resident if the 15 per cent VAT rate was reduced to 10 per cent.

7.4 Waste regulations and other business red tape

Businesses face all kinds of legal hurdles – in their founding, their dealings with the government, and their day-to-day operations – which regulate their intra-business as well as their customer-related affairs.

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84 Michal Horáček, an accomplished Czech songwriter, first asserted that these organisations resemble a protection racket in 1989; however, nothing changed. 'OSA Nostra', *Mladý svět*, October 1989.

85 Excluded in this calculation are the TV and radio license fees, which make for an additional Kč5,400 (€220) a year for the defined pub.

The reliable benchmark measure of regulatory barriers used to be the World Bank's Doing Business Index, which was discontinued. In its last report for the year 2020, the Czech Republic was 41st out of 190 economies (78th percentile; World Bank 2022). If we compare this result with the Economic Freedom of the World Index, where the Czech Republic now ranks 17th out of 165 (90th percentile; Fraser Institute 2022), we see that there is a clear mismatch and room for improvement, relative to what the political status quo finds acceptable. Prima facie, doing business in the Czech Republic is more burdensome than the general state of economic freedom would lead us to believe.

Things get even bleaker if we take a closer look at the Doing Business sub-indices. These indices show that the Czech Republic is the best in the world in international trade, which is a category that is out of its hands because the EU is responsible for the trade policy of member countries. The Czech Republic performs better than its general rank in getting electricity, resolving insolvency, and property registration, but fails its entrepreneurs in all other categories.

For the past five years, the Liberální Institut has tried to calculate the red-tape cost to businesses in terms of man-hours lost. Developed by the Slovak think tank INESS, the Bureaucracy Index takes a model four-person business that, most importantly, produces waste.[86] We then calculate how many man-hours the business needs to devote to comply with all the red tape regulating it. The results for the respective years can be seen in Figure 7.

Figure 7: Bureaucracy index for the Czech Republic (man-hours)

Year	Number of hours spent on paperwork
2017	247
2018	233
2019	226
2020	223
2021	272

Source: Liberální Institut (2022).

86 The exact specifications for this company can be seen at BureaucracyIndex.org (Vlachynsky and Kráľová 2022).

The year 2021 saw a huge COVID-related increase: COVID testing took 48 man-hours, according to our calculation. If we subtract this exceptional amount and calculate an average for the years 2017–2021, we get an average of 231 man-hours for red-tape compliance – that is five man-weeks, four man-days, and seven man-hours that one employee in a four-person firm spends on obligatory paperwork. In other words, for almost six weeks, one employee works not for the customers of the company, but for the state.

The Czech median wage in Q2 of 2022, which is the last period for which we have data, was Kč45,641 (€1,877) (gross) or Kč29,065 (€1,195) (net).[87] The man-hours translate to 1.33 months of wages that are paid by the employer to the employee without the employee actually contributing to the firm's revenue, which equals Kč60,620 (€2,493) (gross) or Kč38,604 (€1,587) (net) at the median wage. In the eyes of entrepreneurs, this money could be better spent on the employee doing something productive.

Going by the 2021 calculations, it takes our model business 27 man-hours to comply with wage regulations; 16 hours to comply with hiring and firing regulations; 94 hours (48 hours thereof due to COVID) to comply with worktime reporting regulations; 51 hours to comply with tax regulations; 57 hours to comply with waste regulations; and 10 hours to deal with vehicle and certification regulations (such as occupational safety training).

These are only implicit costs, borne by the business because one employee is dealing with these issues and is therefore not able to cater to paying customers. There are, however, also explicit costs connected to some of these requirements. For example, for occupational safety training, businesses pay companies that 'teach and test', even though the usefulness of this training is questionable at best.

In theory, every employee must undergo a medical exam before entering a new company. Employers are required to facilitate this exam for their new employee (who can just quit the job the next day if she feels like it). This is pure rent-seeking by medical doctors. It is mitigated by the fact that small businesses generally do not fulfil this obligation. Non-compliance lowers their operating costs but exposes them to potential fines.

87 Source: ČSÚ (2022b), calculated for an employee with one dependable child and no disabilities. The reported wage is the total compensation, including the employer's contribution to health and social insurance. This is called the 'super-gross wage' in Czech political jargon.

As we have seen, waste management takes a lot of a firm's time. The model company in our Bureaucracy Index is a small carpentry. Restaurants and hotels that we dealt with in the previous section have a different structure of waste but are burdened by similar obligations. 'Producers of waste' cannot simply dump their waste into a regular trash can or dumpster, even though a lot of them do. They need to have a contract with their city waste service and pay the necessary fee by ton of waste.[88]

In addition, everyone with a turnover of more than Kč25 million (€1 million) who sells packaging or packaged products – i.e., any business that sends books, shoes, food or anything in packaging to customers – has to ensure that this waste is returned from the customers. Most eligible businesses register with EKO-KOM, an authorised packaging company, which uses financial incentives and educational campaigns to motivate waste handlers, municipalities, and consumers to behave in a way that meets the waste targets set by EU legislation. Businesses pay EKO-KOM according to its price list. The whole system exists only to meet the targets set by European legislation. If these targets were relaxed, this waste system would cost businesses less money.

Figure 8: Key recycling targets

	All packaging	Plastic	Wood	Ferrous metals	Aluminium	Glass	Paper and cardboard
by 2025	65%	50%	25%	70%	50%	70%	75%
by 2030	70%	55%	30%	80%	60%	75%	85%

Source: Council of the EU (2018).

Even though none of these fees and obligations constitutes an undue burden that would kill off a business on its own, all these requirements add up.

88 'Nový zákon o odpadech: Přehled 10 vybraných změn', *ePrávo*, 26 February 2021 (https://www.epravo.cz/top/clanky/obcanske-pravo/novy-zakon-o-odpadech-prehled-10-vybranych-zmen-112600.html).

7.4.1 **Policy recommendations:** The government should reduce and rationalise obligatory paperwork for businesses. At a minimum, the government should not add new duties.

7.4.2 **Takeaway:** In a small four-person business, it takes almost six weeks of one employee's labour – or in other words €1,587 of wages – to fill out the necessary paperwork for and administer tasks mandated by the government. If we take a conservative view of reducing this burden by only 25 per cent, it still gives our model business a saving of €400 a year, which they can use to give the employee more vacation or increase production.

7.5 Lifestyle regulations

According to the average over the past ten years, a Czech consumer drinks 291 beers (145.4 litres) in a year, 100 glasses of wine (19.6 litres), and 140 shots (6.9 litres). Although this number may seem high, it is equal to the country's actual average consumption per head, including infants. An average Czech also likes to smoke – 98 packs every year. Let's now look at the prices and taxes.

Whereas the average price for bottled beer is Kč11.32 (about €0.5) per half litre,[89] the draught premium Pilsner Urquell is pushing Kč60 (€2.47) in every major city,[90] with the share of draught beer being around 41 per cent.[91] The excise tax for beer is calculated as Kč32 (€1.32) per 100 litres for every percentage point of wort.[92] Half a litre of a lager at Kč11 (€0.45) includes Kč1.76 (€0.07) of excise tax and Kč1.96 (€0.08) of VAT, totalling Kč3.72 (€0.15) in taxes, or 32.86 per cent of the price. For a Pilsner priced at Kč60 in a pub, the excise tax remains the same but the VAT increases to Kč5.45 (if drunk on the premises of the pub; see the section 'Restaurants and services'). Figure 9 gives a rundown of these calculations.[93]

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89 One may wonder whether a beer for Kč11 tastes good, but the statisticians' average price is such (ČSÚ 2022c).

90 'Hospody v Česku zdražily: Cena za půllitr Plzně pokořila 60 korun a šplhá dál', *Deník*, 21 October 2022. https://www.denik.cz/ekonomika/pivo-v-cesku-zdrazuje.html.

91 'České pivovarství ukázalo svoji sílu, po covidu ale čelí dalším výzvám', České *pivo*, 2022 (https://ceske-pivo.cz/tz2022/ceske-pivovarstvi-ukazalo-svoji-silu-po-covidu-ale-celi-dalsim-vyzvam).

92 *Wort* is 'a sweet liquid drained from mash and fermented to make beer and whiskey' (Merriam-Webster 2022).

93 Simplified to only two types and only two VAT rates; see section 'Restaurants and services' for a discussion.

Figure 9: Average beer consumption in the Czech Republic, annual

	Price (0.5 litres)	Consumption (litres)	Amount spent (CZK)	Excise tax (CZK)	VAT (CZK)	Total tax (CZK)	Tax share
Bottle	11.32	59.61	1,349.66	209.84	234.24	444.08	32.90%
Draught	60	85.79	10,294.32	301.97	935.85	1,237.81	12.02%
Total		145.4	11,643.98	511.81	1,170.09	1,681.89	14.44%

Source: ČSÚ (2021d).

Non-sparkling wine is exempt from excise tax. VAT on wine is 21 per cent, no matter how or where it is consumed. There is an excise tax imposed on sparkling wines, to the tune of Kč2,340 per 100 litres. The share of still wines in the total consumption of wines is about 90 per cent (Celní správa 2022).

Figure 10: Average wine consumption in the Czech Republic, annual

	Price (litres)	Consumption (litres)	Amount spent (CZK)	Excise tax (CZK)	VAT (CZK)	Total tax (CZK)	Tax share
Still	108.71	17.5	1,902.37	0.00	330.16	330.16	17.36%
Sparkling	160	1.9	304.00	4.45	52.76	57.21	18.82%
			2,206.37	4.45	382.92	387.37	17.56%

Source: ČSÚ (2021d).

The excise tax for spirits is Kč32,250 (1,326 EUR) per 100 litres of ethanol, making it Kč322.50 (€133) per bottle of ethanol, which is equal to Kč129 (€5.30) per bottle of a 40-per-cent spirit. The VAT is again equal to the standard rate of 21 per cent. The table in Figure 11 is therefore rather straightforward.

Figure 11: Average spirits consumption in the Czech Republic, annual

	Price (litres)	Consumption (litres)	Amount spent (CZK)	Excise tax (CZK)	VAT (CZK)	Total tax (CZK)	Tax share
40%	250	6.9	1,725.00	890.10	299.39	1,189.49	68.96%

Source: ČSÚ (2021d).

The average price of a pack of cigarettes has risen to about Kč125 (€5.14).[94] The calculation of the excise tax for cigarettes is a bit more complicated. There is a 30 per cent tax and also a Kč1.88 (€0.077) tax per cigarette, which amounts to Kč37.60 (€1.54) per pack. The VAT is again 21 per cent (Figure 12).

Figure 12: Average cigarette consumption in the Czech Republic, annual

	Price (pack)	Consumption	Amount spent (CZK)	Excise tax (CZK)	VAT (CZK)	Total tax (CZK)	Tax share
cigarettes	125	98.0	12,250.00	7,359.80	2,126.03	9,485.83	77.44%

Source: ČSÚ (2021d).

In 2023, the excise tax on cigarettes is due to the increase to Kč1.97 (€0.081) per cigarette, making it Kč39.4 (€1.61) per pack.

Figure 13 shows the grand total of an average Czech's annual consumption.

94 'Od ledna stoupnou ceny cigaret zhruba o pět korun. Zdražení ale nemusí státu zajistit vyšší příjmy', *Lidovky*, 9 November 2022 (https://www.lidovky.cz/byznys/cigarety-zdrazi-krabicka-cigaret-od-ledna-stoupne-spotrebni-dan-z-tabaku-o-pet-korun.A221109_111935_ln_ekonomika_vag).

Figure 13: Average alcohol and cigarette consumption in the Czech Republic, annual (CZK)

	Amount spent (CZK)	Excise tax (CZK)	Excise tax share	VAT (CZK)	VAT share	Total tax (CZK)	Total tax share
Total	27,825.35	8,766.15	31.50%	3,978.04	14.30%	12,744.59	45.80%

Source: ČSÚ (2021d).

Of the total tax from the annual consumption of alcohol and cigarettes, Czechs pay almost half – more precisely 45.80 per cent – to the state; the rest is divided between farmers, producers, shopkeepers, and others in the supply chain.

Unlike in other countries, Czechs are lucky not to have lifestyle regulations imposed on their consumption of food and non-alcoholic beverages. There is room for liberalisation or for a lower VAT, as we have discussed previously, but these do not rise to the level of state interventions in the alcohol and cigarette sectors.

7.5.1 **Policy recommendations:** Even though it is tempting to increase excise taxes, the government should abstain from doing so because together with the VAT, they comprise too big a share of the final price.

7.5.2 **Takeaway:** The government earns €364 in excise taxes and €165 in VAT from an average Czech's alcohol and cigarette consumption every year.

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Chapter 8
The consumer price shock in Sweden – a reform package to press prices back

By Stefan Fölster

- Swedes' wages after adjusting for inflation will take five to ten years to recover from the inflation shock of 2022.
- Faster recovery is possible if counterproductive taxes and regulations are rolled back.
- In this paper, I calculate a reform package to lower consumer prices by 14 per cent within a few years.
- The reforms include abolishing 'nanny state' regulations and taxes that place a relatively larger burden on low-income earners. For example, municipalities should not be allowed to stop the establishment of low-price grocery stores or charge unreasonable inspection fees.
- The largest consumer price reductions can be achieved by slashing the licensing bureaucracy in the energy and building sector that delays most projects by years, and sometimes decades.
- Abolishing some counterproductive environmental and labour market regulations could also help lower consumer prices.

8.1 Introduction

The unanticipated inflation shock has squeezed Swedes' real wages so much that it may take five to ten years of normal wage raises (in the range of 2-3 percent annually) to recover the loss. Many households find it hard to cope. The main policy response so far has been to dole out petty compensations while waiting for the war and the energy crisis to end.

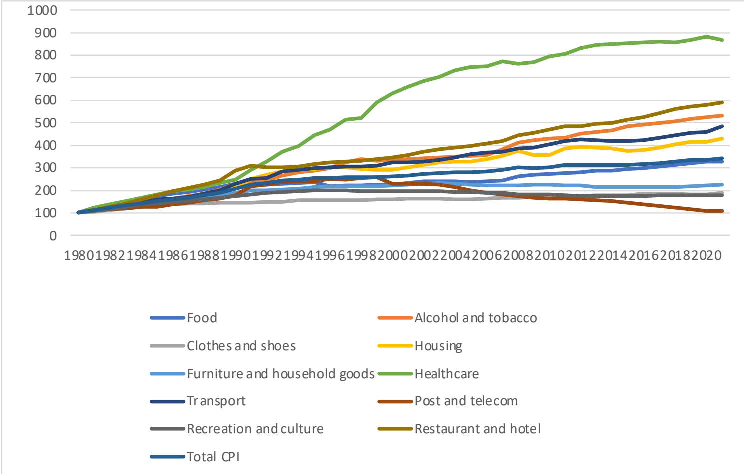
Yet there is a faster solution. Over the years, costly regulations, fees, and other burdens have been piled on with the paternalistic aim of nudging consumers towards what specific governments wanted. This largely happened under the radar, hidden by decent wage increases and falling prices for digital goods and services. From 2000–2021, the consumer price index (CPI) in Sweden increased by 32 per cent. Disposable incomes in the same period, however, increased by 113 per cent, largely as a result of lower interest rates, lower taxes, and reforms that increased growth and employment. The hefty increase in real incomes and living standards hid the swarm of new regulations and fees that simultaneously raised prices for Swedish households.

In this report, I calculate the effects of a reform package. Reforms would consist of scrapped counterproductive regulations that could lower consumer prices by more than they have been raised by this year's inflationary shock. A longer, Swedish, version of the paper explains the calculations in greater detail (Fölster 2022b).

8.2 Decades of 'nanny state' regulation

Prices are either particularly high or have risen in heavily regulated sectors, such as healthcare, alcohol and tobacco, transport, and restaurants. The prices of goods imported through competitive international markets (including electronics and telecommunications), on the other hand, have increased to a lesser extent, and sometimes even fallen (Figure 1).

Figure 1: Consumer price changes in Sweden, base year: 1980 = 100



Source: Statistics Sweden.

Many regulations and taxes, sometimes called 'nanny state' regulations, are introduced with the express intention of interfering with how people live their lives. To illustrate how just a few of them cumulatively affect consumers, consider Ulla, a Sweden citizen.

Ulla earns a low (but not unusual) salary of kr 276,000 per year or kr 219,360 after taxes. Ulla is not a big consumer of alcohol, but drinks beer a few times a week and treats her friends to a bottle of wine over the weekend. She smokes nine of the cheapest variety of cigarettes a day. Ulla takes public transport to work, but her mother, who lives further away, needs help several times a week. Therefore, she drives her old car, which consumes 13 litres of petrol a week.

Ulla's lifestyle is not extravagant or decadent, but the costs of what can be described as sin taxes are still significant, devouring 7.7 per cent of Ulla's income. In most countries, as in Sweden, sin taxes are regressive and take a larger share of income from low-income earners (Conlon, Rao, and Wang 2021; Fölster 2022b).

In addition, many municipalities curtail the establishment of low-price grocery stores, often justifying this as a desire to influence lifestyle choices. Ulla's municipality, for example, requires a fee of kr 10,000 per year to issue a permit to sell tobacco, and kr 35,000 per year for inspection of food shops, even if no inspection has taken place. What is worse is that the municipality also stopped low-price food retailers. The proposal to establish a low-price retailer in the external shopping centre was denied with the reason that people should not drive so far to shop. Permissions for establishments in the town centre were denied on the grounds that there is a lack of parking and that shops already exist, albeit more expensive ones. Such paternalism can easily cost Ulla in the order of 10 per cent higher prices for her food purchases if she lives in a restrictive municipality, according to the studies I describe further in this paper. Table 1 shows the cost of nanny state regulations for Ulla.

Table 1: Ulla's annual sin taxes in SEK

Cigarettes (63 per week)	6962
Fuel (13 liters per week)	7585
Beer (2 liters per week)	1248
Wine (1 bottle per week)	1073
Regulations that raise food prices by 10%	3070
Total	**19938**

The burden of such taxes and regulations, which are aimed at influencing lifestyle, naturally raises questions – not least because it causes substantial economic redistribution which, on average, places a heavier burden on people with lower incomes.

The Swedish prices for alcoholic beverages are 62 per cent above the EU average, and for tobacco, they are 16 per cent above average. These are high mark-ups, but are not among the highest in Europe. According to the recently developed Nanny State Index, which measures punitive taxes on sugar and other sinful consumption, Sweden ranks 10th in Europe, while Finland tops the list (Snowdon 2021). Sweden's new government has decided to raise the tax on both alcohol and tobacco even more.

As the example of Ulla illustrates, protective regulations can burden food consumers far beyond sin taxes alone. In 2022, food prices look set to increase by approximately 15 per cent. Swedes buy food worth approximately kr 300 billion per year. Price increases in 2022 alone could cost households an additional kr 45 billion.

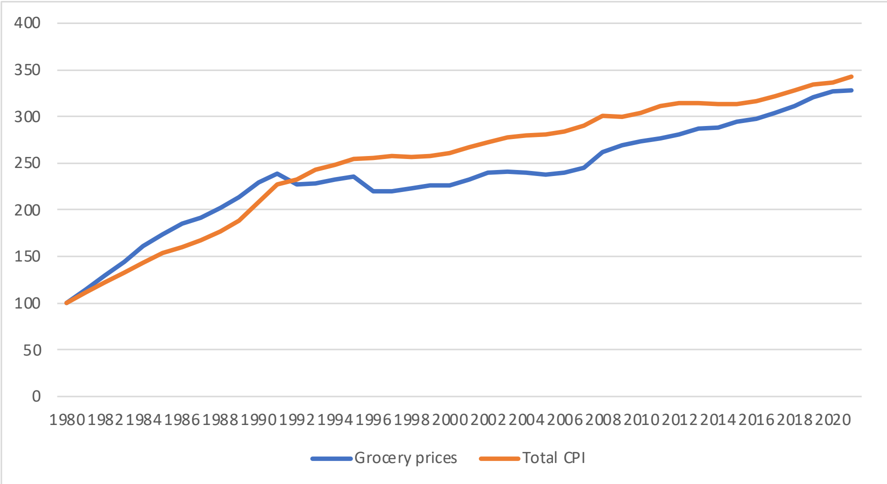
Even before the current crisis, food in Sweden was relatively expensive. According to Eurostat (2022), food prices (excluding beverages and tobacco) were 16 per cent above the EU average. That is in itself not remarkable, because Swedish wages also exceed the EU average by about the same percentage. The more relevant comparison, however, is with countries such as Germany and the Netherlands which with similar average wages have significantly lower food prices than Sweden. In Germany, prices are 10 per cent lower, and in the Netherlands, they are a full 20 per cent lower. Such a gap is remarkable, even taking into account that the VAT for some types of food in these countries is 6 and 7 per cent, respectively, compared to the 12 per cent in Sweden.

Possibly Swedes did not pay much attention to food prices before the crisis because they were even higher in earlier decades. Before joining the EU in the early 1990s, food prices in Sweden exceeded the EU average by 60 per cent; after, they began gradually converging.

High food prices are sometimes argued to be the result of Sweden's relatively small population, which is spread over a large area with long transport distances. However, transport costs constitute a negligible share of the prices in stores. Indirectly, however, distance prevents consumers in some towns from being able to choose between competing stores in surrounding towns. The Swedish Competition Authority has repeatedly complained about the competitive situation in the grocery trade in Sweden (Swedish Competition Authority 2018). Although foreign players such as Lidl and Netto have gained market share, market concentration in Sweden is high relative to many other European countries. In 2016, the three largest chains accounted for approximately 86 per cent of the market share. The market share for discount stores is more than twice as large in Germany as it is in Sweden.

In 1992, in order to increase competition and lower food prices, the new market-oriented government abolished the municipalities' right to prohibit grocery stores. Chapter 5 of the Planning and Building Act (Section 7) also introduced an explicit rule that regulations on the use of buildings must not be designed in such a way as to discourage effective competition. In 1997, the Social Democratic government re-introduced the earlier rules, which again allowed municipalities to prohibit the establishment of new grocery stores. Figure 2 shows how grocery prices fell relative to consumer prices in the early 1990s but rose quickly again over the next 20 years.

Figure 2: Grocery prices and the consumer price index



Source: Statistics Sweden.

The Swedish Competition Authority (2004, 2018) reviewed 16,000 detailed plans in 163 municipalities and found that municipalities had inhibited competition in the food trade by denying permission for the establishment of new stores. The agency also proposed that the Planning and Building Act be amended to clarify that competition must be given greater importance.

A recent survey also showed that there are large differences between municipalities when it comes to food inspection (Näringslivets Regelnämnd (NNR) 2020). One municipality may charge as much as kr 35,000 in annual inspection fees, while another charges only kr 1,480. Municipalities also have considerable power in levying fees, mandating checks, imposing long processing times, or making decisions hostile to businesses.

Food prices could be at least 5 per cent lower with improved competition, according to an assessment by the Swedish Competition Authority based on existing studies. Since then, the price situation relative to both the CPI and comparable countries with low prices has not changed much. Discount chains still report that their inability to acquire competitive store locations is the biggest obstacle to their growth. Many municipalities claim they want to stop the establishment of external shopping centres in order to protect the city centre, but at the same time reject the establishment of grocery stores in the city centre, citing a lack of parking. These positions are often due to the pressure exerted from established grocers.

The example of Ulla, and the burden placed on her, illustrates a few of the many regulations and taxes that have gradually come to burden consumers. Many of these also turn out to be ineffective or counterproductive. How would prices be affected if some of these were abolished?

8.3 The reform package

In this report, I calculate the consequences of a number of unnecessary regulations and fees. I also present how these can be abolished and what price reductions we can then expect. The reform proposals concern five areas – food and lifestyle, energy, environment and climate, housing, and the labour market.[95] The combined effects of the reform package proposed in this report would, conservatively calculated, reduce consumer prices (as measured by the CPI) by close to 14 per cent. Real incomes of Swedish households would rise by as much. The report's calculations are based on official statistics, previous research studies, and my own calculations. Table 2 summarises the total effects of the reform package on both how many billion Swedish kronas can be saved over a five-year period and how big a change in the consumer price index we can expect.

95 A few of the proposals in the reform package are on the agenda of the new Swedish government.

Table 2: Swedish consumers' annual savings and the reduction in the consumer price index as a result of the reforms in the five focus areas of the reform package.

Reform areas	Consumer savings in billion SEK, annual	Reduction of consumer price index, per cent
Counterproductive energy regulation	–143	–6.5
Lifestyle and food	–15	–0.7
Counterproductive environmental regulation and taxes	–23	–1
Building costs	–133	–6.3
Labour market regulation	–20	0.9
Total	**–334**	**–13.6**

The following sections present a brief review of the components of the proposed reform package.

8.4. Counterproductive energy regulation

The reform package for energy consists of two parts.

1. Electricity production is designated a so-called 'national interest', for which current permit requirements are partially abolished. This waiver applies to license extensions for cogeneration plants, but also to wind and solar power. Most importantly, in the short term, three types of taxes that were recently introduced for cogeneration plants have been

scrapped. Municipal fees for applications/notifications for geothermal heating and solar cells as well as building permit requirements for the installation of solar cells have also been completely abolished. The planned re-examination of permits for existing Swedish hydropower has been scrapped. These reforms should, within a five-year period, result in an increase in electricity generation which, according to recent simulations, can lower electricity prices in southern Sweden by 50 per cent (Energiforsk 2021). Even for nuclear and offshore wind power, the permit process should be drastically simplified, but the effects of this would be more long-term and are therefore not included in the calculations here.

2. A large part of the energy price increase cannot be attributed to the higher international prices, the war in Ukraine, or policy mistakes, such as the closure of four Swedish nuclear power plants in recent years. Instead, it can be explained by the levers in Swedish taxes and policy instruments that impose proportional or progressive costs on companies and consumers when the underlying energy prices rise, as this boosts tax revenue (Fölster 2022a).

This increase in revenue could be used to reduce fuel taxes. However, the reform package here instead proposes abolishing the electricity tax. This tax has long been criticised by researchers and experts as being a purely fiscal tax that most immediately exacerbates climate change. In addition, I propose that fees to the state-operated power grid authority are reformed, as well as the current requirement to blend biofuel with gasoline and diesel (Gustafsson 2022).

The reform proposals for energy could together mean that households save 6.5 per cent of their consumption expenditure over a five-year period or kr 143 billion per year.

8.5 Food and lifestyle

New grocery stores, not least discount stores, should get permits and access to premises more easily. During the period 1992–1997, municipalities were prohibited from denying the establishment of competing shops. During these years, food prices fell significantly in relation to the consumer price index, but after 1997 they rapidly increased again.

The reform I propose here is that the Planning and Building Act be amended so that municipalities immediately ensure good competition in the distribution of groceries. At the same time, fees for inspection of food stores must not exceed certain thresholds.

The reform proposal could reduce food prices by 5 per cent. This corresponds to household savings of kr 15 billion per year, which would lower the CPI by 0.7 percentage points.

8.5.1 Environmental and climate regulations

Sweden's industry today produces less than it did in 2010, despite the strong recoveries in the world economy after the financial crisis and the pandemic, and despite an erosion of the exchange rate by more than 20 per cent. Counterproductive environmental and climate regulations bear some of the blame for this decline, as they are draconian in some respects and threaten the closure of entire industries. Researchers and authorities also heavily criticise some of these regulations for being ineffective and expensive. Swedish consumer prices are significantly affected by these counterproductive environmental and climate regulations.

The proposed reform package focuses on dismantling only five of all the environmental taxes that various studies found lacking in any positive effect (Brännlund 2018; Fölster 2022b).[96] In addition, I propose a shift from state-funded climate measures to those that the research literature found to be cost-effective; I also suggest cuts in the bureaucracy surrounding environmental permits (WSP 2022).

All in all, the reform proposals in the environment and climate area would, conservatively calculated, save kr 23 billion per year, which would reduce the CPI by 1 percentage point.

8.5.2 Construction costs

According to Eurostat, construction costs in Sweden are 40 per cent higher than the EU average. Adjusting on the basis of a statistical model that corrects for differences in countries' wages, taxes, and capital costs,

96 See Brännlund (2018), and Fölster (2022b) for a review of the studies that corroborate the counterproductive effects of these particular environmental taxes. The taxes include a tax on electronics, another on some plastic shopping bags, and a tax on agricultural weed killers.

Sweden's construction costs still appear to be 22 per cent higher than those of other European countries. The research literature lists possible causes as over-regulation and the municipalities' reluctance to release land and process planning procedures. In addition, lodging appeals is easy and can be done during many stages of the planning process.

The reform proposal consists of three parts: first, the Planning and Building Act should be radically simplified; second, the Housing Supply Act, which should be tightened so that municipalities are liable to pay fines if they do not release land in a situation where there is a housing shortage; and third, a fee that should be charged for appeals. Consider Munich, where the time from intention to moving in can take two to three years, something German politicians sometimes lament. In Sweden, 10 years for the same process is not unusual.

If construction costs can be reduced by 15 per cent, consumers would save kr 133 billion per year, which in the long run can lower the CPI by 6.3 percentage points.

8.5.3 Labour market regulations

According to index of regulations, the Economic Freedom indext, Sweden has one of the world's most regulated labour markets.[97] Labour market regulations have many indirect consequences. For instance, they normally strengthen unions' bargaining positions. In Sweden, this has, among many other things, helped unions enforce much higher minimum wages than in any other country as part of collective bargaining agreements. A representative 19-year-old working weekends in retail, for example, can easily earn more than the median wage as a result of high minimum wages and generous allowances for inconvenient working hours.

The reform proposal here would create a new form of employment that is not subject to collective bargaining. This would give the employer the right to hire people as apprentices at a salary equivalent to the German apprentice salary, which is on average kr 10,000 per month. Since such an apprenticeship would cover training costs as well as jobs for people who may have low productivity, it is assumed here that the employer's cost would correspond to kr 15,000 per month – which still amounts to a

97 Economic Freedom index (2022).

reduction of 30 per cent compared to today’s minimum wage in the industries where such apprenticeships are likely to come into use.

According to numerous studies, this reform could reduce consumer prices by 3 percentage points in retail and restaurants (Allegretto and Reich 2016; Aaronson, French, and MacDonald 2008). At the same time, there is good research to support that employment in vulnerable groups could increase, which could mitigate Sweden´s considerable structural unemployment.

The labour market reform is calculated to save consumers kr 20 billion per year and lower the CPI by 0.9 percentage points.

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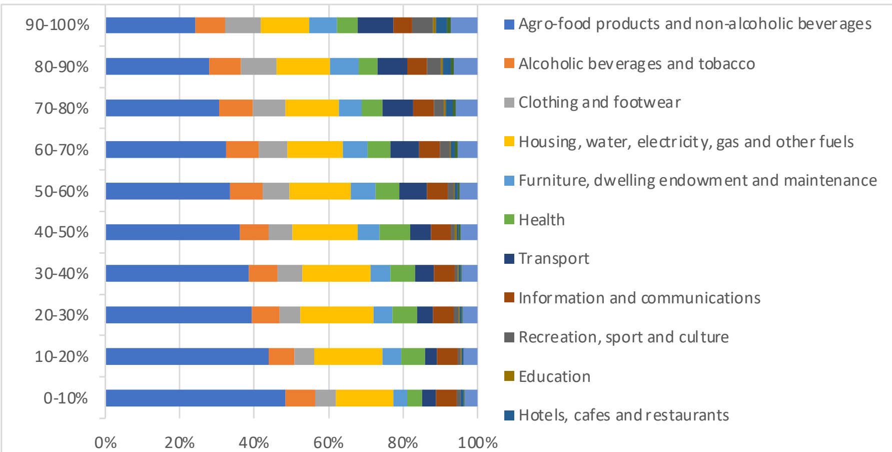
Chapter 9
The rising cost of living in Romania: recommendations for reducing inflation

By Christian NĂSULEA, Radu NECHITA, Diana-Florentina NĂSULEA

- In recent years, the sharp increase in monetary supply, the disruption in supply chains caused by anti-Covid restrictions and the war in Ukraine caused a general rise in prices at rates unseen in previous decades. Taxation and regulatory measures targeting some specific sectors are amplifying price increases.
- Alcohol, tobacco, sugar drinks and, especially, energy are made deliberately more expansive by EU and/or national authorities, as a way to discourage their consumption and to collect fiscal revenues.
- These specific taxation and regulation measures have a disproportionate impact on low income families, have sometimes undesirable consequences and reduce overall efficiency. They are under a more direct control of political authorities, therefore an ideal target for any reform destined to reduce prices on the short and long run.
- For demographical, political, fiscal and economic reasons, pension system reform is one of the most important and urgent. Because it is a long term reform, it was ignored or postponed for decades, but this strategy is not possible anymore without unbearable risks.
- The relative success of telecom sector is due to a lower level of regulation, compatible with innovation and competition. However, regulatory authorities are jeopardizing this comparative advantage.

- The National Bank of Romania has forecast an inflation rate of 16.3 per cent for 2022, and the inflation rate for the third quarter of the year, was confirmed to be 15.9 per cent (National Bank of Romania 2022). Such increases in the Consumer Price Index (CPI) have not been recorded in the Romanian economy since the beginning of the 2000s (INS 2022a)
- In this study, we aim to identify the non-monetary causes of price increases and analyse the source of the increases and the impact on different segments of the population. We also explore the possible courses of action that can lead to stopping the inflationary episode and limiting its effects.
- Inflation affects everyone, but not in the same way. For low-income citizens, some categories of products and services will have a much greater impact on the family budget. In 2021, the poorest 10 per cent of Romanians allocated 48.5 per cent of consumption expenses for the purchase of food products and non-alcoholic beverages, compared to the 24.2 per cent allocated by the richest 10 per cent (INS 2022d). Also, for energy and fuels, the poorest 10 per cent of Romanians allocated up to 15.2 per cent of their income compared to the 13.2 per cent allocated by the richest (Figure 1).

Figure 1: Structure of expenses



Source: INS (2022d).

- Moreover, it is more difficult for wages to adjust to market conditions. In an inflationary situation, lower wages tend to increase later. This leads to a decrease in the purchasing power of the poorest families. Inflation makes the poor poorer (Paul and Sharma 2019).
- These differences, which are correlated with the different rates of price increase for various categories of products and services, mean that inflation is felt very differently by Romanians from different backgrounds or income categories. Thus, the poorest 10 per cent of Romanians ended up experiencing an estimated average inflation rate of at least 16.7 per cent in October 2022, which was at least 1.4 per cent above the rate calculated for the entire population of Romania. More generally, the entire half of Romania's population with lower incomes experienced a price increase higher than the official inflation rate in October.[98]

9.1 Deliberate price increases to 'take care' of citizens

In Romania and at the level of the European Union, there are taxation mechanisms aimed at encouraging responsible behaviour in the consumption of alcohol, tobacco, or sugar-based drinks; or with regards to pollution. Excise taxes contribute to the increase in prices of these product categories. In other words, the state claims to take care of us by making some products that consumerslike more expensive.

9.1.1 Alcohol and alcoholic beverages

Regarding alcohol and tobacco, the state imposes a so-called 'vice tax' or 'health tax'. In 2006, Law no. 95/2006 on health reform came into force (Official Gazette of Romania 2015). According to its reasoning, the law was introduced in order to 'combat the excessive consumption of tobacco products and alcoholic beverages, other than wine and beer, as well as to finance health expenses'. This law and its later modifications established some of the excise duties described in Table 1 and Table 2, which are valid until 31 December 2022.

98 We made the estimates by correlating the information calculated by the INS for the CPI in October 2022, using the information calculated for the level and structure of total consumption expenditure per decile reported for the year 2021. We recalculated the weighted inflation rates to harmonise the used methodologies.

At the European level, the general regime of excisable products and the rules regarding the possession, circulation, and monitoring of excisable products were regulated, until 1 April 2010, by means of Directive 92/12/EEC and further by Directive 2008/118/EC . As shown in Tables 1 and 2, in most cases Romania applies excise duties above the minimum level imposed by the European Union.

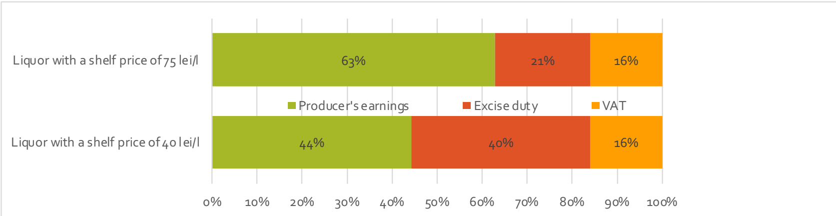
Table 1: Excise duties on alcohol and alcoholic beverages

Name of the product or group of products	M.U.	Excise duties level, Romania (lei/MU)	Minimum EU excise duties EU (lei/MU)	Differences between RO and EU minimum (%)
Beer produced by independent producers whose annual production exceeds 200 thousand hl	hl/1 Plato deg	3.96	3.69	7%
Beer produced by independent producers whose annual production does not exceed 200 thousand hl	hl/1 Plato deg	2.18	1.85	18%
Still wine	hl of product	0	0	No EU minimum
Sparkling wine	hl of product	56.86	0	No EU minimum
Intermediary products	hl of product	476.21	222.23	114%
Ethyl alcohol produced by large distilleries	hl of pure alcohol	3968.38	2716.18	46%
Ethyl alcohol produced by small distilleries	hl of pure alcohol	1984.19	1358.09	46%

Sources: Ministry of Finance (2022a); European Commission (2022).

The impact of excise duties on the final price of alcoholic beverages is not negligible. For spirits, the total level of taxes applied to consumption (excise duty plus VAT) can reach 56 per cent of the shelf price of the products (Figure 2). In the example we calculated, the excise duty and the VAT applied represent 47 per cent of the shelf price. In other words, the application of the excise tax leads to an increase in the shelf price by 89 per cent.[99]

Figure 2: Taxation of spirits



Source: Authors' computations based on data from Ministry of Finance (2022a)[6].

9.1.2 Tobacco products

For tobacco products, the impact is similar, although the methodology for establishing the vice tax is more complicated. The minimum level of excise duties at the European level is set at €90/1,000 cigarettes but not less than 60 per cent of the weighted average retail price. By setting the excise tax above €115/1,000 cigarettes, European legislation no longer requires compliance with the minimum percentage of 60 per cent of the weighted average retail price. The Romanian state seems to have opted for the latter option for cigarettes and heated tobacco products, as Table 2 shows.

99 We made this calculation starting from a 1l bottle of liquor with a concentration of 40 per cent pure alcohol and a shelf price of 40 lei, and the information on the Excise Regime published by the Ministry of Finance (2022a). We chose the price of the liquor by looking for the lowest price for each type of liquor using price comparison websites price.ro and compari.ro on 15 November 2022.

Table 2: Excise duties for tobacco products

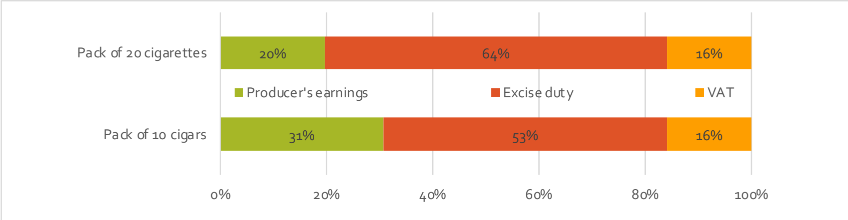
Name of the product or group of products	M.U.	Excise duties (lei/M.U.)	Minimum EU excise duties (lei/ M.U.)
Cigarettes	1.000 cigarettes	594.97	444.47
Cigars	1.000 pieces	346.50	59.26
Finely cut smoking tobacco, intended for rolling in cigarettes	kg	548.61	296.31
Other smoking tobaccos	kg	548.61	108.65
Liquid containing nicotine	ml	0.64	0
Tobacco contained in heated tobacco products	kg	594.97	444.47

Sources: Ministry of Finance (2022a); European Commission (2022).

Total taxes on a pack of cigarettes can exceed 80 per cent of the shelf price (Figure 3). Excise duty and the VAT applicable to excise duty represent 77 per cent of the shelf price. In other words, the excise duty increases the selling price of a pack of cigarettes more than four times.

For cigars, the total taxes can exceed 69 per cent of the shelf price. In this situation, the excise duty and the VAT applied to the excise duty represent over 63 per cent of the shelf price. In short, Romanians smoke excise taxes.

Figure 3: Taxation of cigarettes and cigars



Source: Author's calculations based on data from the Ministry of Finance (2022a).[100]

9.1.3 Sugary drinks

Starting 1 January 2023, as a result of the amendment of the Fiscal Code by Government Ordinance 16/2022 (Romanian Government 2022), the VAT rate increased from 9 to 19 per cent for beverages subject to codes 2202 10 00 and 2202 99, namely, mineral and carbonated waters containing sugar, other sweeteners, or flavouring; or other beverages, such as soy-based beverages (Government of Romania 2022). This change comes in the wider context of the World Health Organization's efforts to prevent non-communicable diseases, such as cardiovascular disease, hypertension, diabetes, and obesity. A study published by the WHO in February 2022 examined the taxation of high-sugar soft drinks adopted by the governments of certain countries in Europe (Belgium, Finland, France, Hungary, Ireland, Latvia, Monaco, Norway, Portugal, and the UK) (WHO 2022a) regarding their effectiveness in reducing sugar consumption. In recent years, a number of other studies (Pell et al. 2021; Lee et al. 2019) have shown the potential positive impact of such taxes that discourage the population from consuming sugar-based drinks, but nevertheless, most EU member states have not yet adopted such a vice tax.

The adoption of a vice tax is justified by the intention to reduce the excessive consumption of a product that is bad for people's health. According to a recent WHO study on obesity in 54 countries (WHO 2022b), 58 per cent of adults in Romania are overweight, a percentage slightly below the EU obesity average. At the same time, data on the daily consumption of sugary soft drinks, provided by Eurostat (2019), placed Romania well below the

100 Calculation made starting from the information related to the Excise Regime published by the Ministry of Finance (2022a) and the minimum prices identified on the market for cigarettes and cigars: 18.5 lei for a pack of 20 cigarettes and 6.5 lei for a pack of 10 cigars.

EU average. That is, only 3.3 per cent of Romanians consumed a sugar-based drink daily, versus 9.1 per cent of the average European (Eurostat 2019). Another report, published by the INS in 2021, showed a decrease in the average consumption of soft drinks per capita in 2020 compared to 2019, from 103.8 litres to 89.6 litres (INS 2021). This data suggests that although there is a real obesity problem in Romania, a tax on sugary drinks may not have the desired effect.

Taxes on sugary soft drinks fall under the category of regressive taxation, which tends to hit lower-income consumers harder. The latter already spend a higher proportion of their income on food and drink; increasing the level of taxation could translate into fewer resources for purchasing healthier food products. Furthermore, there are examples that show that the introduction of taxes with the aim of changing consumer behaviour regarding food choices can have a net negative impact – as in Denmark, where in 2011, a tax on saturated fat was introduced and abandoned fifteen months later, once the unintended consequences became clear; it was hard to bear for the population as a whole (Snowdon 2013).

9.1.4 Accommodation, restaurants, and catering

The same ordinance passed by the Government of Romania (2022) also establishes an increase in the VAT rate in the tourism and hotel, restaurant, and café (HORECA sectors) from the current level of 5 per cent to 9 per cent starting in 2023.

The Special Report on EU support for tourism, carried out by The European Court of Auditors (2021), mentions that the COVID-19 pandemic restrictions had a dramatic impact on the tourism sector. Data made available by the World Tourism Organisation (2022) shows the decrease in the number of foreign tourists in EU member states for the period January–December 2019, compared to the same period in 2020, due to the restrictions following the COVID-19 pandemic. With an 83 per cent decrease, only Cyprus was more affected by the pandemic in terms of tourism. This decrease in the number of tourists has deeply affected the tourism sector, the number of jobs, and its contribution to the GDP. To support the tourism sector, a financial package of €449 million was offered through the national recovery and resilience plan. Which tourism companies had access to this package remains to be analysed based on the size of those companies.

In this context – of a sector already affected by the COVID pandemic – the increase in VAT to 9 per cent will put additional pressure on both entrepreneurs and consumers. This 4 per cent increase may seem insignificant, but it comes against the background of increases in energy bills and food prices, thus generating higher costs.

In a period marked by rising inflation, raising the level of taxation will only put increased pressure on people’s finances and contribute to the general rise in prices.

9.1.5 Recommendations

Our recommendations for this sector revolve around taxation as much of the recent damage done to the institutional environment of the sector and many of the factors with adverse long-term effects on lifestyle trace their roots back to taxation.

Excise duties

Excise duties and VAT do not represent the totality of taxes that average consumer bears through the purchases made. There is a number of other taxes included in the price of the goods that are passed on to the final consumer, such as income tax, property taxes, taxes on means of transport, fees for issuing certificates, approvals and authorisations, and all kinds of special or local taxes. We are therefore talking about multiplied direct and indirect taxation, and this cannot be omitted when reviewing the causes of price increases or discussing the implementation of a fair taxation system.

Another problem with indirect taxation, especially so-called ‘vice’ taxation, is that we do not calculate the impact that vice taxes have and evaluate their effectiveness in achieving their purpose. The declared objective of these fiscal policies is the improvement of public health, but this objective is rarely achieved. Economic theory tells us that when the price of a product rises considerably, be it through taxation or other mechanisms that lead to price increases, if there are substitutes in the market, consumers will turn to them. However, substitutes can be as harmful or even more harmful than the original product, which compromises the objective stipulated by the public authorities. Additionally, substitution takes place to a larger extent in the case of products that are not essential, or that have easy-to-access substitutes. Things are far more complicated when dealing with highly addictive products, such as tobacco. The increase in excise duties leads to a smaller reduction in the quantities consumed in the official market. Moreover, taxing less harmful substitutes (such as e-cigarettes) does not help fulfil the theoretical objective of encouraging the population to not consume such harmful products. Taxation becomes, in this situation, only a way to bring in additional public revenue. Is there a transparent way to see if the money coming from the vice tax is going towards solving public health problems? Does taxation help change consumer overconsumption behaviour, or does it simply force everyone to pay more for a product just because some people over-consume that product?

Considering the rising inflation and the fact that a significant part of the population, especially those with low incomes, have difficulty covering basic expenses, our first recommendation would be to reduce excise duties to a level as close as possible to the mandatory minimum established by EU directives and to ask for a reduction in the minimum quotas imposed at the EU level.

VAT

The increase in VAT from 9 to 19 per cent for certain products from the beginning of 2023 will contribute to the increase in prices of these products, which will in turn reduce the purchasing power of consumers. Moreover, the increase in VAT for hotels, restaurants, and catering services will increase the economic pressure on a sector already affected by the COVID-19 pandemic. In the current economic context, the recommendation is to return to the previous VAT rates. Otherwise, pressure will be exerted to increase prices, which will lead to a restriction on the consumption of services in the HORECA sector. A domino effect may possibly impact the whole chain of economic activities connected with the tourism sector. For example, we can expect a reduction in the number of jobs; the closure of restaurants and hotels; some companies exiting the market; and, overall, a decrease in the competitiveness of Romanian tourism.

Investments and business environment

Inflation has a negative impact on the flow of foreign direct investment because it acts as a tax on investment when the costs of labour, capital, and transport are rising. Rising inflation is a risk that makes an economy less attractive to foreign investors. Curbing inflation is therefore a matter of great urgency.

The current economic situation also gives us the opportunity to rethink Romania’s attractiveness as a host country for foreign direct investments.

In the years after joining the EU, the existence of a skilled, but above all cheap, labour force represented a real competitive advantage, which attracted a relatively large number of foreign companies. As Romania's economy began to approach the development level of other European states, the gaps narrowed, increasing the standard of living. But this means that the main advantage that initially attracted foreign investors has a much-diminished effect in present times. A country that is at the bottom of the European rankings for land and rail infrastructure – and which also has real problems in the field of education – risks becoming less and less attractive for investments. Relatively low taxation thus remains one of the few advantages of the Romanian economy.

Consumption taxes in Romania are lower than the EU-27 average, sending a positive signal to the business environment. However, they are above the minimums required by EU legislation, and are not the lowest in Europe in all cases. Romania must not only avoid increasing taxes in order not to affect its economic indicators and competitiveness. The reduced tax rates must also be accompanied by the reduction of fiscal instability and uncertainty, which are relevant aspects for foreign and Romanian investors.

9.2 Energy

At the EU level, the promoters of energy over-taxation use mostly the environmental argument. However, this is not very convincing, especially at a time when Romanians are struggling with the shortcomings caused by the galloping increase in prices. Of course, reducing pollution is important, but the priority should be to increase the availability of energy in a country where a large percentage of the population lives in a state of energy poverty.

9.2.1 The current situation

Apart from the general increase in prices, and the inevitable consequence of loose monetary policies (especially in the last three to four years), high energy prices are caused by several specific factors, some of which have been operating for a long time and others that have been added recently:

- Regulatory EU 'persecution' of energy sources considered non-green: coal, shale gas, and more recently, diesel (the state has banned diesel engines in some cities), and also, in the near future, gasoline (by banning internal combustion engines);

- Fiscal ‘persecution’, through explicit (excise duties) or implicit (carbon taxes) over-taxation;
- The consequences of the Russian invasion of Ukraine, with the uncertainties, disruptions, and destruction inherent in war, combined with the political decisions to sanction the aggressor state (through embargos)

9.2.2 Production and consumption

According to the data for the first nine months of 2022 (INS 2022f: 76), Romania has a varied energy mix and a relatively high degree of coverage of its energy needs from domestic production, with imports representing 25.92 per cent of the main energy resources. However, the situation presented does not include the consumption of wood, a fuel used by about half of the country’s households, most of which (80–85 per cent) are located in the countryside. The amount of firewood (about 6.5 million cubic meters, or about 3 million tons) represents a third of the total harvested wood, ‘which places Romania, according to official statistics, among the countries with a high consumption of firewood for heating, being surpassed only by France among countries with a higher production than Romania’ (PWC 2022).

This energy resource should not be neglected, especially since Romania has set a target of 30.7 per cent final energy consumption from renewable sources through the 2021 Integrated National Plan in the field of Energy and Climate Change (PNIESC). In terms of energy (tons of oil equivalent), the largest import, relative to both domestic production and total energy imports, was oil.

In other words, although Romania presents itself much better than the EU average, with 41.7 per cent of the requirement covered by domestic production (Eurostat 2022a), it is still far from the objective, ideal, or myth of energy independence.[101]

The diversity of the energy mix also exists in the case of electricity (INS 2022d: 77). Although there is a deficit covered by imports, it represents a small percentage of the total electricity (2.76 per cent). However, it is important to note the ‘degree of integration’ with the energy system of

101 Rudnițchi, C. 2022. Mituri și adevăruri despre energie. Nu suntem independenți, cărbunele este esențial, consumul scade, *RFI Romania*, 28 November 2022 (https://www.rfi.ro/economie-150918-mituri-adevaruri-energie-nu-suntem-independenti-carbune-esential).

neighbouring countries: electricity imports and exports represent an equivalent of 24.03 per cent of total consumption.

The largest drop in electricity production was in the hydro component (due to the drought), and the largest increase came from wind. Increases in imports (14 per cent) were higher than increases in exports (9 per cent). Regarding consumption, the reaction of the population has been remarkable: electricity consumption has decreased to only 91.9 per cent of the amount consumed in the same period of 2021. It is likely that higher prices have changed behaviours while increasing energy efficiency – for example, through the expanding use of LED bulbs or higher energy class appliances – has a less significant effect: it manifests itself continuously over time and does not produce significant short-term variations.

A September 2022 survey shows that ‘prices, inflation, utilities, and energy prices’ are the main reason for concern (CURS 2022), especially for low-income citizens. According to a recent study carried out by the Center for the Study of Democracy, depending on the indicator used, ‘energy poverty’ affected around 10–13 per cent of Romanians, and the burden of energy bills is too heavy for 45 per cent of the population (Sinea et al. 2022: 11). The data used was from 2018, before successive price increases, so the current situation can only be worse.

9.2.3 Regulations

The year 2022 began with continued discussions on energy price controls, and it is likely to end in exactly the same way.

For a quarter of a millennium, economists have been explaining why price controls exacerbate every problem they are supposed to solve. However, politicians, even those with minimal economics education, are tempted to resort to this measure. The reason is that although the total costs are greater than the benefits, the latter are immediately visible and/or concentrated on a small number of voters. The negative effects of price controls are felt later, and affect a large number of people who do not always identify their cause. Ultimately, price controls negatively affect even those who initially enjoyed this ‘gift’.

Energy price increases have reached unsustainable levels, especially for poorer families and certain industrial sectors. Most often, they have been mistakenly attributed to the functioning of the free market,[102] and not to distortions induced by political interventions or even insufficient liberalisation.[103]

A more elaborate criticism, which converges at the same conclusion, is aimed at setting the price by aligning it with the marginal cost of the most inefficient producer. The proposed alternative would be to return to politically controlled prices, in which, for example, the electricity produced by hydropower plants would have a different (lower) price than that produced in thermal plants, which in turn would also be differentiated according to the type of fuel used.

This solution is tempting because it would allow the practice of artificially lower prices, but it generates other problems: who will benefit from the lower prices, and according to what criteria? If pricing is set based on the 'cost of production plus regulated profit' system, what motivation do producers have to reduce or at least maintain their costs at the current level? If the higher profits of more efficient technologies are practically forced through to the consumer, what is the motivation for investors to choose more efficient technologies over others? If the price mechanism is disturbed, how do we know which option is more economically efficient?

Politicians' reactions to price increases were quick but uninspired, under the pressure of insufficiently informed public opinion. The government decided to block the market, instead of eliminating distortions and mitigating the impact on some disadvantaged social categories.

Capping the price of firewood is a textbook illustration of the consequences of this intervention. Its price – along with those of other energy sources – started to increase as early as 2021, when there were calls for increased social heating benefits and even price caps. In the fall of 2022, this growth accelerated, and the authorities wanted to protect one of the most vulnerable socio-demographic categories: elderly residents in rural areas. The solution

102 Ștefănescu, C. 2022. România în tornada prețurilor, *Deutsche Welle România*, 10 August 2022 (https://www.dw.com/ro/rom %C3 %A2nia- %C3 %AEn-tornada-pre %C8 %9Burilor/a-62769838).

103 Păcuraru, C. G. 2022. Anomalia „pieței libere” de energie din România și o mostră de prostie europeană, *Contributors.ro*, 3 August 2022 (https://www.contributors.ro/anomalia-pietei-libere-de-energie-din-romania-si-o-mostra-de-prostie-europeana/) and Păun, C. 2022. Să acuzi piața și liberalizarea de situația actuală din energie și gaze trădează o lipsă acută de logică și educație economică, *Republica*, 2 February 2022 (https://republica.ro/sa-acuzi-piata-si-liberalizarea-de-situatia-actuala-din-energie-si-gaze-tradeaza-o-lipsa-acuta-de-logica).

adopted through Emergency Ordinance no. 134/2022[104] was to cap the price of firewood at 400 lei/m^3 (1,500 lei/t for briquettes and 2,000 lei/t for pellets) – below the one already practiced on the market mentioned in the very text of the ordinance: ‘prices exceeding 700 lei/m^2 were encountered at home improvement stores or resellers’.

The implicit idea was to eliminate the middlemen or reduce their margin, encouraging the direct sale of this ‘derivative product’, as the ordinance called it, to consumers. Romsilva, owned by the state, formally complied, but it remains to be verified whether there is any product available at the displayed prices. The measure was applicable starting ten days after publication, only for contracts signed later, and until 31 March 2023. We cannot know if the fine of 3,000–5,000 lei will be able to force any seller to conclude a contract a day, week, or month before 31 March instead of waiting until 1 April.

The effect of capping at a price slightly above the market price led to the disappearance of firewood, briquettes, and pellets from the official market and the emergence of a parallel market. This situation has benefited illegal deforestation networks and increased the vulnerability of the country’s poorest inhabitants. As the forest fund is unequally distributed, rural households in the lowland areas (where the poorest counties in the country are located) may end up having to purchase firewood at a higher price than before the ceiling, which also includes the risk premium of the seller who breaks the law.

The negative consequences announced by economists and representatives of each industry quickly manifested, and the authorities admitted the error and undertook steps to correct it. The order correcting the Emergency Ordinance of 5 October had not yet been issued at the time of publication of this paper.

104 Emergency ordinance no. 134/2022 regarding some measures to protect the end consumer in terms of the use of wood materials and products derived from wood, for heating the home in the cold season, *Official Gazette of Romania Part I no. 970*, 5 October 2022 (http://sgglegis.gov.ro/legislativ/docs/2022/09/dwzn78_4rj5y6qxh2t1p.pdf)

The legislative instability suggested by those numbers is remarkable: in just nine months of 2022, 134 emergency ordinances were issued, and the authorities’ decisions required 907 editions of the Official Gazette to be published – in other words, an average of three editions per day, or almost five editions per working day!

9.2.4 Bad news

The statements regarding the exit of the Enel group from Romania sent a negative signal, although they are yet to officially notify ANRE of their intention. (a precondition for a transaction). This decision follows other notable withdrawals in recent years: those of Exxon and CEZ. Apart from considerations regarding the strategy of the Italian group, the most likely reason is related to the losses it recorded as a result of the capping of retail prices within the context of increased purchase prices and production costs.[105]

9.2.5 Achievements and good news

The disconnection of Ukraine and the Republic of Moldova from the system of the Commonwealth of Independent States, and their connection to the power grid of the EU (ENTSO-E) also connected them to that of Romania. The chosen moment turned out to be particularly opportune. The interconnection tests were scheduled for the morning of 24 February 2022, with the actual shutdown to take place in 2023. The Russian invasion on the same day turned the test into an actual shutdown a year earlier than planned. After a short period in which the Ukrainian and Moldovan energy systems operated in isolation, in mid-March 2022, Ukraine and the Republic of Moldova were connected to the European network.

In the first stage, this interconnection allowed Moldova and Romania to use the surplus from Ukraine. Now, since mid-October, after the bombings that partially destroyed the Ukrainian production capacities, Romania provides about 90 per cent of the electricity needs of the Republic of Moldova.[106]

In 2021, the reduction in the price of a barrel of oil from the highs of $122–123/barrel to values comparable to those before the invasion ($85/barrel), combined with the situation specific to the Romanian market (of reduced consumption and increased stock levels) contributed to the

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105 Rusu, F. (2022) Ce active din România vrea să vândă Enel, ce se va întâmpla cu contractele și cu clienții companiei, *Profit.ro*, 24 November 2022 (https://www.profit.ro/povesti-cu-profit/energie/ce-active-din-romania-vrea-sa-vanda-enel-ce-se-va-intampla-cu-contractele-si-cu-clientii-companiei-20928593?); Petrescu, R. (2022) România pierde încă un greu din energie: Italienii de la Enel trec de la investiţii record la exit în numai doi ani. „Ne ducem unde reglementările susţin investiţiile”, *Ziarul Financiar*, 23 November 2022 (https://www.zf.ro/companii/energie/romania-pierde-inca-un-greu-din-energie-italienii-de-la-enel-trec-de-21344005).

106 Mărculescu-Matiș, A. (2022) Cum a ajuns România să țină becul aprins peste Prut. Filmul celei mai mari crize de energie din istoria Republicii Moldova, *Panorama.ro*, 21 November 2022 (https://panorama.ro/moldova-criza-energie-romania-electricitate-gaz/).

reduction of fuel prices at the pump. A recurring debate concerns the speed and extent to which international oil price fluctuations are reflected in pump prices. In response to these concerns, the Competition Council made an analysis of pump prices without taxes for standard fuel (gasoline or diesel) for the period 1 July 2019–30 June 2022 (Competition Council 2022). The conclusion of the report was: ‘Based on aggregated weekly data, for both gasoline and diesel, in most of the cases analysed, the hypothesis of a symmetrical adjustment of the price at the pump depending on the evolution of the Platts quote is accepted’.

In other words, fuel price adjustments are made roughly as quickly up and down depending on the price of oil. Moreover, ‘the symmetry of the pump price adjustment to changes in Platts gasoline quotes is much better supported’ over the period under review (01.07.2019-20.06.2022) compared to that found in a similar study corresponding to the period 2014–2018. The price increases that have taken place are therefore not attributable to the non-competitive nature of the distribution of petroleum products, which, as we mentioned, are linked to monetary policies (particularly the accelerated growth of money supply in recent years), fiscal policies (the increase in the excise tax from 1 January 2022) and the international situation (the war in Ukraine, sanctions against Russia, OPEC decisions, etc.).

The ‘Romanian Energy Strategy Project 2019–2030, with the perspective of 2050’ (an official document), provides for Groups 3 and 4 from the Cernavodă Nuclear Power Plant, which has a power of 700 MW/unit; the National Integrated Plan in the field of Energy and Climate Change also provides for these groups. Stage 1 of the project was launched on 25 November 2021, when Energonuclear SA and Candu Energy – a member of the SNC–Lavalin Group and Design Authority of Units 3 and 4 and OEM Candu (the Original Manufacturer of Candu Technology) – signed a contract. The second stage (18–24 months) consists of preliminary work, obtaining approvals, and refining the feasibility analysis. At the end of this stage, the final decision will be made and, most likely, the actual work (or stage three) will begin, with the reactors expected to go online in 2030–2031. The Export-Import Bank of the United States (Eximbank) has issued letters of interest for Phase 2 financing, which it offers for the entire project. A Romania–US intergovernmental agreement in the field of nuclear energy, signed in 2020, mentions the availability of US Eximbank financing of $7 billion.[107]

In September 2022, the project company RoPower Nuclear SA was launched, owned in equal parts by SC Nuclearelectrica SA and Nova Power & Gas SA. Its objective is to implement the first NuScale VOYGR-6 power plant in Romania. The deal concerns six small modular reactors (SMR) with an individual power of 77 MW (a total of 462 MW), which will be located on the site of a former coal-fired power plant in Doicești. The plant is set to be completed by the end of this decade.[108]

On June 15, 2022, Black Sea Oil and Gas (controlled by Carlyle, an American investment fund) announced that it had begun extracting gas and pumping it into the Transgaz system. This is a shallow deposit, estimated at 10 billion cubic meters (10 BCM), almost as much as Romania's annual consumption. If its exploitation were carried out for 10 years, it would be equivalent to almost 10 per cent of the annual consumption. According to the agreement with the Romanian state, these quantities can also be exported. Even if it is not sold on the domestic market, this additional production indirectly contributes to reducing Romania and the EU's dependence on gas sold by companies controlled by aggressive dictatorships. Another positive effect is the increased competition in a market dominated by big players, which otherwise has negative effects on consumers.[109]

107 \`US Exim Bank offers finance for Cernavoda 3 and 4', *World Nuclear News*, 9 November 2022 (https://www.world-nuclear-news.org/Articles/US-Exim-Bank-offers-finance-for-Cernavoda-3-and-4); Dumitrache, M. (2022) EXIMBANK! 2 scrisori emise pentru finanțarea serviciilor tehnice de pre – proiect furnizate de SUA pentru unitățile 3 și 4 ale Nuclearelectrica!, *Ripostapenet.ro*, 9 November 2022.

108 Nuclearelectrica (2022) Nuclearelectrica SA și Nova Power & Gas SRL lansează RoPower Nuclear SA, compania de proiect pentru dezvoltarea de reactoare modulare mici în România. Press Release, 27 Septmeber 2022 (https://www.nuclearelectrica.ro/2022/09/27/nuclearelectrica-sa-si-nova-power-gas-srl-lanseaza-ropower-nuclear-sa-compania-de-proiect-pentru-dezvoltarea-de-reactoare-modulare-mici-in-romania/).

109 Nuțu, O. (2022) Primele gaze din Marea Neagră: adevărata veste bună, *Contributors.ro,* 16 June 2022 (https://www.contributors.ro/primele-gaze-din-marea-neagra-adevarata-veste-buna/).

The announcement by OMV–Petrom regarding the start of gas extraction in 2025 from a deposit on the continental shelf of Georgia also follows the same idea.[110]

As early as 25 May 2022, progress was announced regarding the pipeline that would connect Serbia with Romania (the BRUA gas pipeline).[111] Despite the changes in the Serbian government, the prime ministers of the two countries announced that the project will continue.[112]

9.2.6 Recommendations

The current situation in the energy sector can be improved only with an immediate and coherent reform package, that is sustained in the long run.

Short term

1. Abandon price-capping strategies (which demotivate both saving and resource production) and possibly mitigate the social impact through other compensation mechanisms, subject to income. The mechanism must stimulate economies of resources, also by the beneficiaries of the aid.
2. Avoid the adoption of new measures that include 'price controls' and ideally even the evocation of such ineffective and counterproductive measures.
3. Reduce Romanian excise duties on energy to the minimum level allowed by the EU.

110 Ionescu, A. N. (2022) OMV Petrom va extrage gaze din Marea Neagră dintr-un zăcământ al Georgiei, mai devreme decât dintr-unul românesc nou. *CursDeGuvernare,* 18 July 2022 (https://cursdeguvernare.ro/omv-petrom-va-extrage-gaze-din-marea-neagra-dintr-un-zacamant-al-georgiei-mai-devreme-decat-dintr-unul-romanesc-nou.html)

111 SIonescu, A. N. (2022) Serbia se va putea conecta la gazoductul BRUA în 2024. Proiectează conducta până la granița cu România, *CursDeGuvernare,* 25 May 2022 (https://cursdeguvernare.ro/serbia-se-va-putea-conecta-la-gazoductul-brua-in-2024-proiecteaza-conducta-pana-la-granita-cu-romania.html).

112 Diac, M. (2022) Se construiește un gazoduct România – Serbia, *Romania libera,* 28 November 2022 (https://romanialibera.ro/economie/economie-international/se-construieste-un-gazoduct-romania-serbia/)

Medium term

4. Accelerate electricity and gas interconnection efforts. Thus, consumers gain from the increased competition (as it creates lower, more stable prices) and the increasing security of delivery (as an interconnected network is less vulnerable to accidents or attacks, and is more reactive).

5. Extract gas from already identified gas perimeters, such as the 42–84 billion cubic meters from the Neptun Deep area (an off-shore gas field in the Black Sea) or the 30 billion cubic meters from Caragele (in the Buzău county)[113];

6. Continue exploration (including for shale gas). Of course, the state cannot intervene directly in this process, but it can do so indirectly, through its capacity as a shareholder of some of the companies that own the concessions. Another contribution of the state would be to avoid the decapitalisation of energy companies through the claim of distributing dividends (which are used to cover some public expenses that are not sufficiently justified, such as consumption expenses and privileges granted to certain categories of officials). Perhaps, however, an even more important contribution of the state would consist of ensuring legislative stability, which has been explicitly and publicly requested by Romanian and foreign investors.[114] The cessation of prospecting by Chevron and the sale of Exxon's participation in the exploitation of the Neptune Deep field are not necessarily in Romania's interest. Investor withdrawals and disputes at the Paris Arbitration court (such as the one with BSOG[115]) are not a positive signal for other potential investors. Uncertainty would also be reduced if politicians and high-ranking officials refrained from making various proposals for special taxes, preferential procurement clauses, or even nationalisations.

7. The Romanian authorities must substantiate and initiate proposals to reduce the minimum level of energy excise duties at the EU level. The EU's energy strategy is subordinated to fiscal and ecological imperatives. The artificial increase in energy costs threatens the competitiveness of EU companies, the

113 Nuțu, O. (2022) Primele gaze din Marea Neagră: adevărata veste bună, *Contributors.ro,* 16 June 2022 (https://www.contributors.ro/primele-gaze-din-marea-neagra-adevarata-veste-buna/)

114 \`Verchere: Avem nevoie de stabilitate în Legea offshore pentru a extrage gazele din Marea Neagră', *Energynomics,* 23 September 2022 (https://www.energynomics.ro/verchere-avem-nevoie-de-stabilitate-in-legea-offshore-pentru-a-extrage-gazele-din-marea-neagra/).

115 Nicuț, M. (2022) BSOG extrage gaze la maximum din Marea Neagră, 3 mil. mc zilnic, dar nu oprește arbitrajul international cu statul român. *Economica.net,* 28 June 2022 (https://www.economica.net/bsog-extrage-gaze-la-maximum-din-marea-neagra-3-mil-mc-zilnic-dar-nu-opreste-arbitrajul-international-cu-statul-roman_594966.html)

economy as a whole, and ultimately, even the financing of the European social model and the quality of the environment that are invoked as arguments for this policy. This is even more important for Romania, which has a poorer population than the EU average and cannot afford artificially expensive energy.

8. It is in Romania's interest to position itself explicitly and proactively in favour of nuclear energy, alongside France, in all EU courts.

Long term

Increase nuclear power production, critically revise the norms that prove excessive, and then stabilise them to be able to move to standardisation, mass production, and prefabrication. Thus, the costs of building a nuclear power plant can be significantly reduced without compromising quality. Re-analyse and, if necessary, revise the objectives ofthe Green Deal. The recent events on the international stage and the increase in energy costs due to measures taken in the past must launch a serious discussion: is it rational to spend trillions of dollars/euros to reduce the global temperature by a fraction of a degree over a century, when there are alternative ways to adapt to climate change? This is not an all-or-nothing decision, but a marginal one made according to the marginal costs and marginal benefits of each individual policy.

9.3 Telecommunications

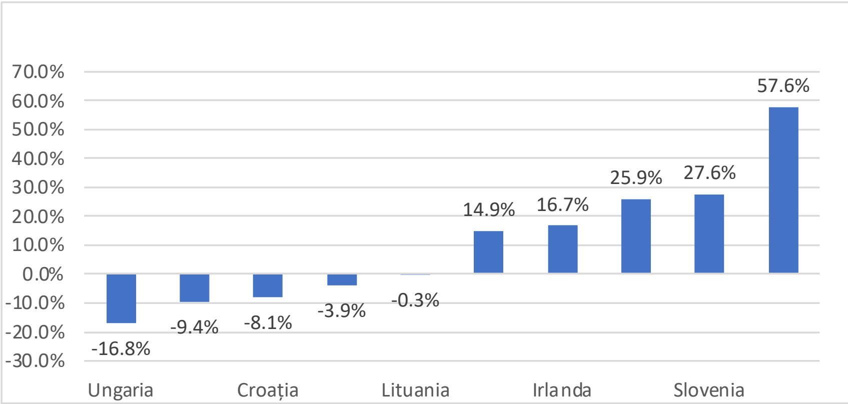
The field of telecommunications is atypical for the Romanian economy. It is the only area in which there was a decrease in prices during October 2021–October 2022, with the price of telephone services falling by 0.76 per cent (INS 2022b). In the longer run, from 2015–2022, the price of fixed telephony services decreased by 9.5 per cent (Eurostat 2022b).

Prices for Internet access provision services increased between 2015–2022, with rates that were well below the inflation for the same period. The overall increase in internet service prices was 3.33 per cent (Eurostat 2022c) while the cumulative inflation for the same seven-year period was 33.72 per cent (Eurostat 2022d).

The quality of services is also very high; fixed internet speed in Romania is among the top ten worldwide (Ookla 2022). The average download speed through fixed connections was, in October 2022, the second highest among EU countries after France; Romania was surpassed at the European level only by Switzerland and Monaco (Eurostat 2022b).

How is it that in the telecommunications sector we encounter such performances that are not found in other fields? We can certainly attribute some of these results to technological progress. Technology is advancing, quality is improving, and prices for providing services are falling. If this were the only explanation, however, we should have seen similar effects on the prices of telecommunications services all over Europe or even all over the world. However, while the prices of services decreased in Romania, they experienced significant increases in other European countries (Figure 4).

Figure 4: Top 5 decreases and top 5 increases in the prices of landline services (2015–2022)



Source: Eurostat (2022b).

The analysis of a cause-and-effect relationship between the legislative framework and the price level should take into account market conditions in the telecommunications sector and other areas and market conditions in Romania and other states; and is beyond the scope of this study. However, we can illustrate this relationship with a few examples.

For comparison, we can look at the energy sector. Although energy has its specificities, in both areas, telecommunication and energy, we are dealing with the provision of services according to a similar model. Both markets are considered to be liberalised although distribution to the final consumer is regulated, forcing a distinction between service sellers and network operators.

The level of regulation in the field of telecommunications is relatively low. There are dozens of EU directives, laws, and ordinances issued by the Romanian authorities and hundreds of decisions by the National Authority for Management and Regulation in Communications of Romania (ANCOM), which are all aimed at regulating the field. These are in addition to the large number of laws affecting the economic and fiscal framework in general. The impact of regulations on the activity in thenergyy field is much greater than in that of telecommunications, and the constraints imposed are much more severe.

Environmental permits are also required in the field of telecommunications, and the number of licenses for certain activities is limited by ANCOM. However, the costs and time required to complete the legal formalities to enter the market are lower than in the energy field.

In 2021, 2,322 companies were active in the field of telecommunications (CAEN division 61), and 2,346 companies were active in the energy field (CAEN division 35) (Table 3 and Table 4) (Ministry of Finance, 2022b; ONRC 2022).

Table 3: Telecommunications companies in 2021: number, turnover, profit

NACE	Telecommunications	No. of active firms	Turnover (mil. lei)	Profit (mil. lei)
6110	Telecommunications activities through cable networks	1,021	4,201	292
6120	Telecommunications activities via wireless networks (excluding satellite)	370	13,584	893
6130	Satellite telecommunications activities	77	134	22
6190	Other telecommunications activities	854	2,289	246
61	TOTAL	2,322	20,209	1,453

Source: Ministry of Finance (2022b); ONRC (2022).

Table 4: Companies in the energy sector in 2021: number, turnover, profit

NACE	Energy	No. of active firms	Turnover (mil. lei)	Profit (mil. lei)
3511	Electricity production	1,926	20,950	6,743
3512	Electricity transport	6	3,708	2
3513	Electricity distribution	30	5,907	95
3514	Commercialisation of electricity	173	28,708	492
3521	Gas production	19	464	11
3522	Distribution of gaseous fuels through pipelines	44	4,630	256
3523	Commercialisation of gaseous fuels, through pipelines	52	20,352	587
3530	Supply of steam and air conditioning	96	4,242	45
35	TOTAL	2,346	88,961	8,231

Source: Ministry of Finance (2022b); ONRC (2022).

Although in terms of the number of companies, the two fields are very close, on comparing the number of companies to the turnover, we notice that the firms in the energy field have an average turnover 4.4 times higher than those in the telecommunications field. The average profit in energy is also 5.6 times higher than in telecommunications. The difference is explained by the increased competition in telecommunications, which is a less regulated field in a market where access is less restricted.

9.3.1 Recommendations

The field of telecommunications is less regulated than other fields. This relatively better situation can still be improved. Bureaucracy in the sector should be reduced further and market access for potential investors must be simplified.

No special measures need to be taken with regards to taxation. The authorities must resist the temptation they have shown in other areas to oscillate unpredictably between subsidising and overtaxing.

9.4 Pensions

Retirees are among the poorest citizensof Romania. The long-term sustainability of the Romanian public pensions system is under threat. This situation is the result of delayed and incomplete reforms. Any viable solution requires better information about the realistic perspectives of the public pension system and about the alternative of privately administrated pension funds.

9.4.1 Improve the public pension system

The current situation is of a severity that is intuited but underestimated by the public and ignored by thepoliticians. According to a survey carried out in September 2022 by ISRA Center for APAPR (Association for Privately Administered Pensions in Romania), only 37 per cent of Romanians trust that the state will be able to pay their pensions, and 55 per cent fear that the state will not be able to provide them with a decent pension. Perhaps this sentiment partly explains why Romanian taxpayers go out of their way to avoid contributing to the public pension system. This not only includes undeclared work, but also the risks and administrative burdens associated with operating as a PFA (Authorised Physical Person, a form of self-employment).

9.4.2 Pension reform was late and limited

There have been warnings about the worsening trends in the public pension system since the mid-1990s. The government adopted a solution suggested by the World Bank. It was built on three pillars: a state pay-as-you-go system (Pillar 1 or P1), a mandatory but privately managed system with capitalisation in individual accounts (Pillar 2 or P2), and a system of voluntary contributions capitalised in individual accounts (Pillar 3 or P3). The difference is significant: in the case of Pillar 1, the contributions of the active workforce are collected jointly, in the Social Security Budget, and spent immediately for the pensions of those who entered the system earlier. The system is similar to a pyramid scheme, as one labour minister admitted.[116] For Pillars 2 and 3, contributions are deposited, accumulated, and capitalised in individual accounts, where dividends or interest on securities from the respective funds are also reinvested. The owner retains ownership, a right that can be passed on to descendants in case of premature death.

Although the legislation was in its final form as early as 1998, it was only adopted in 2004, and its implementation in practice was delayed for a decade, until 2007 (Chamber of Deputies 2022a). Mandatory contributions to P2 came from the redirection of part of the contributions established for P1. Contributions for Social Insurance (P1) amounted to a total of 29 per cent of the gross salary (9.5 per cent contributed by the employee and 19.5 per cent by the employer), of which 2 per cent was redirected to P2.

This provision only applied to taxpayers who were under 35 in 2007 – those between the ages of 35 and 45 could choose to allocate the 2 per cent to either P1 or P2. Those over 45 remained fully in the pay-as-you-go pension system.

The percentage redirected from P1 to P2 was to increase annually by 0.5 per cent, reaching a level of 6 per cent in 2016. The government cited the 2008 crisis as the reason for postponing this increase until 2010. Currently, the social security contribution is 25 per cent of the gross salary, of which, for those eligible, 3.75 per cent of the gross salary is redirected to P2[117].

Voluntary contributions to P3 were limited only indirectly, as their tax deductibility was capped at the equivalent of €400/year.

Thus, the reform was not only late, but also limited in terms of scope (as it covered only a section of the employees), the amounts involved (contributions and reduced tax deductions), and the pursued objectives. The main goal of the reform was to save and perpetuate the pay-as-you-go public pension system, and not to replace it progressively with a system based on capitalised contributions in individual accounts.

116 Ioan Botiș was the Minister of Labour in 2011 when he made this statement: Carp, D. (2011) Ponzi, *Radio România Actualități*, 4 March 2011 (https://www.romania-actualitati.ro/arhiva-emisiuni/romania-impreuna/ponzi-id22834.html).

117 The percentage was changed because in 2018 the improperly named social contributions of the employer have been integrated into the gross salary

9.4.3 The problems of the public pension system persist and will worsen without capitalisation

However, the viability of this system – Pillar 1 – is endangered by its very structure, which depends on the ratio between contributors and beneficiaries. When these systems were introduced in the late nineteenth century, birth rates were higher, labour market entry was earlier, and life expectancy was lower than it is today.

In the case of Romania, in 1990, the ratio between contributors and beneficiaries was almost 3.8 to 1. Currently, this ratio is approximately 1:1, with no signs of improvement. On the contrary, in less than a decade the large generations born in the 1960s will retire, and the smaller generations born after 1990 will enter the labour market.

A decade ago, the National House of Public Pensions admitted on its website, along with its consequences: 'All over the world, the **financial difficulties** faced by the social insurance systems are generated, mainly by the **aging of the population**, and in order to balance the budget, measures are adopted to increase contributions or reduce the amount of benefits, or a combination thereof' (emphasis in the original). It is regrettable that this statement no longer appears on the updated version of the website.

> A careful reading of the preceding paragraph highlights not only the recognition of the inevitability of the increase in costs and the reduction of benefits related to the pay-as-you-go pension system, but also another essential element, the implications of which are ignored in the public discourse. Population aging means nothing more than that our grandparents and parents as well as ourselves are living longer. If something so extraordinary creates 'financial difficulties' for a system, it means that the problem actually is the system and its conception, not the people who 'dare' to live longer. A system for which longer life is a difficulty should not be salvaged or repaired, but replaced entirely (Nechita 2015: 47–51)

The most frequent points of contention that partisans brought forward about maintaining Pillar 1 are: the safety offered by the state guarantee, inter-generational equity, inter-generational solidarity, and the difficulty of financing the transition to a system based entirely on capitalisation.

The argument for the safety offered by the state guarantee is not very convincing in a country like Romania, where the hyperinflation of the 1990s expropriated the population's savings (held in bank accounts at state banks) and impoverished generations of retirees (who received a pension denominated in a currency that depreciated from one day to the next, and which, without indexation, was not able to keep up with inflation). This happened even though the right to pension was guaranteed both by the Constitution of the Socialist Republic of Romania (Art. 20) (Chamber of Deputies 2022b) and by the Constitution adopted after the fall of the communist regime (Art. 47) (Chamber of Deputies 2022c). However, it is true that none of these cases specified the purchasing power of the guaranteed pension.

Rather, the appeal of fairness is against a system where the pensions of people with similar salary levels depend significantly on the occupation held and the calendar year of retirement, and not on the level of contribution. Equity is overshadowed by the multitude of professions where it is possible to retire 10–15 years earlier than most contributors, with pensions several times higher than the average. Fairness is even harder to prove if one considers life expectancy after retirement age, which is usually lower for people with low incomes. In case of premature death (before or after retirement), the system does not allow for the transmission of an inheritance (as a capital accumulated, for example) or the due pension (corresponding to the contributions already paid), but only under certain conditions, a survivor's pension.

Inter-generational solidarity cannot be the result of a system that transfers (in a forced and non-transparent manner) resources from one generation to another. On the contrary, the system presupposes that solidarity, and if the transfers turn out to be excessive and arbitrary, it threatens the inter-generational solidarity it claims to strengthen.

The argument of the difficulty of financing the transition seems more convincing: if the current generation contributes to individual accounts, how are the pensions of today's elderly and future retirees, who did not manage to build up a sufficient pension, being paid? Public debt might explode!? The reality is that public debt already exists – it is not explicit, as amounts borrowed by governments, but exists in the form of promises made by states to current and future pensioners. This implicit debt can only be estimated based on assumptions about life expectancy, birth rate, GDP, and income.

The implicit public debt of the public pension system was equivalent to 185 per cent of the GDP in 2015

9.4.4 Let's acknowledge the public pension debt!

The latest available estimate of the implicit debt related to the pension system is from 2015. According to this estimate, 'pension rights accumulated at the end of 2015' were 1,320,173.4 million lei (INS 2018), i.e., the equivalent of 185 per cent of the GDP of that year (INS 2022g).

Therefore, it is not the transition from apportionment to capitalisation that generates public debt. The debt already exists because of past commitments. It just becomes explicit and transparent. Discussions about financing the transition would require a separate study, but from the experiences that exist so far in other parts of the world, we can identify at least four main sources: revenue from privatisation (including concessions of natural resources) and from the contributions of those who have left the system (who continue to pay a contribution to the system through redistribution, as a kind of 'redemption' for their freedom); explicit public debt (probably half the costs); and reduced government waste. Changing the incentive system is likely to stimulate economic growth, thus easing the burden of the transition.

9.4.5 How efficient is the contribution to the public pension system?

This comparison is not easy to make for several reasons. First, the employee did not know the total value of the pension contributions that were covered by the value of his work, because until 2017 in Romania, as in other countries, the total cost of social protection was largely hidden. Only the employee's social contributions appeared on his pay cheque — he was unaware of the so-called 'employer's' social contributions (which were about two to three times higher) and which were actually covered by the productivity of his own work.

The second difficulty is in comparing a real scenario (contribution to P1 and the promise of a future pension, currently set at a certain nominal level) with a hypothetical scenario (contributions in individual accounts to a P2 pension fund in exchange for a pension dependent on returns on stock market placements).

Table 5: Hypothetical portfolio resulting from the capitalisation of Pillar 1 contributions

Year	Monthly average gross salary (lei)	Pension point	Contributions P1 (%)	Contributions P2 (%)	Contributions value P1 (Lei)	Value in 2022 of a portfolio that would have collected P1 contributions
2008	1,761	698	26.88%	2.00%	5,679	16,296
2009	1,845	733	29.03%	2.00%	6,426	33,398
2010	1,902	733	28.80%	2.50%	6,573	49,622
2011	1,980	733	28.30%	3.00%	6,724	65,015
2012	2,063	733	27.80%	3.50%	6,882	79,628
2013	2,163	762	27.30%	4.00%	7,086	93,582
2014	2,328	791	26.80%	4.50%	7,487	107,256
2015	2,555	830	21.30%	5.00%	6,531	118,318
2016	2,809	872	21.20%	5.10%	7,146	129,545
2017	3,223	1,000	21.20%	5.10%	8,199	141,492
2018	4,357	1,100	21.25%	3.75%	11,110	156,507
2019	4,853	1,265	21.25%	3.75%	12,375	172,019
2020	5,213	1,442	21.25%	3.75%	13,293	187,472
2021	5,535	1,442	21.25%	3.75%	14,114	202,690

Sources: INS, National House of Public Pensions (2022a, 2022b), authors' computations.

For this very reason, we chose to compare the two systems only during the period when they existed simultaneously, i.e., 2008–2021. Table 5 highlights the contributions to Pillar 1 of an employee who, throughout this period, was remunerated with the average salary. Under current legislation, an employee paid the average wage over their entire 35-year contribution period would be entitled to a pension equal to 'one pension point', the level of which is set by law. In 2022, the pension point is equal to 1586 lei.

Applying the calculation formula for the period 2008–2021, the related monthly pension provided by P1 would be 634 lei (1586x14/35). In reality, it would be lower for an incomplete period of service.

However, if this average employee had the opportunity to deposit all these contributions in P2, their cumulative value at the end of 2021 would have amounted to a portfolio of 202,690 lei, assuming a nominal yield of 7.82 per cent, equal to the average return of pension funds from P2 in Romania. Assuming the same average return and continuing, this amount would generate an annual income of 16,863 lei. This means that if all the contributions are accumulated and capitalised in P2, the monthly pension of this portfolio would amount to 1,321 lei while keeping the accumulated portfolio untouched, allowing it to remain as an inheritance.

In the simplified assumptions, with equal contributions, the P2 pension level is more than double that of P1. In the longer term, this gap would widen because the capitalisation of contributions would increase the accumulated amounts more than the pension point could increase in the demographic situation in Romania.

The hyperinflation in Romania in the 1990s effectively wiped out Romanians' savings, most of which were in the form at the CEC or in banks. Bond investments are also vulnerable to inflation because even if their interest rates are indexed to inflation, their face value will lose purchasing power. Shares offer higher protection against inflation due to the fact that they represent an ownership right to some companies, and are traded at a market value that is constantly re-evaluated according to the profit prospects of the companies, which integrates anticipated inflation into the prices. In other words, the share price will be re-evaluated to incorporate inflation and at least partially compensate for the loss of money's purchasing power.

9.4.6 Recommendations

Saving, investing, capitalising in individual pension accounts administered professionally is the only reasonable protection against the inevitable partial default of the public pension system. Restrictions on private pension funds must be reduced and the transition from a repartition (pay-as-you-go) system to a system based on capitalisation must be accelerated.

Create reasonable relaxation of Pillar 2 portfolio restrictions

Currently, investments are limited (with very few exceptions) to regulated markets in the EU and the European Economic Area, which excludes many other regulated markets in the OECD with higher growth potential. The maximum investment limit is 50 per cent for shares, and 70 per cent for government securities. Investment in municipal bonds is also limited separately to 30 per cent. Considering that in the long term (over fifteen years) investments in shares bring higher returns than bonds, this asymmetry is difficult to justify, at least for the category of 'dynamic' pension funds (there is only one fund in this situation). However, in 2020, the Financial Supervisory Authority chose to temporarily authorise exceeding the ceiling for investments in government securities, and not in shares.

The minimum profitability requirements are checked quarterly and, if they are not met for four consecutive semesters, the Supervisory Commission withdraws the operating authorisation (Financial Supervisory Authority 2010: art. 11). These requirements, combined with other regulatory incentives, mean that the portfolio of private pension funds is made up of more than two or three government and local government securities. Ensuring a minimum yield year after year has the effect of reducing the long-term average yield.

Increase the tax deductibility ceiling for P3 contributions

The voluntary contribution to P3 is tax-deductible (not subject to social contributions and income tax), but only within the limit of €400/year. It was established at the time of the adoption of Law 411/2004. In 2008, when it was finally enforced, this limit was slightly less than the average gross monthly salary. This ceiling of deductibility has not been revised since then, and currently, due to the increase in incomes of the population, it represents just over a third of the average gross monthly salary.

Review restrictions and information obligations of private pension funds (P2)

The superficial way in which private pension fund managers communicate with their clients is a strategic error. For example, the information received monthly by one of the authors was limited to the following text: `Fund X registered in your account on 19.11.21 the monthly gross contribution of Y lei. Thus you have accumulated a total of Z fund units'. On his individual account, available online, there is information on monthly contributions for the entire period and a summary of the portfolio value. The document can be exported to Excel and processed for yield calculation to possibly make some estimates for the future. It is, however, unlikely that this the vast majority of contributors – 8 million – will make this effort (National House of Public Pensions, 2022a).

The fact that the information provided by fund managers is quantitatively and qualitatively reduced could be explained by the restrictions imposed by the Financial Supervisory Authority (ASF) (Financial Supervisory Authority 2014). However, the analysis of the published rules does not indicate an explicit restriction, other than the prohibition of comparisons between the returns of the funds (comparison with average returns, for example, is not explicitly prohibited). Perhaps there are other rules that are not published on the website, or the ASF has informal means to discourage public information, or it could even adopt abusive sanctions.[118]

Without an awareness of the existence and size of ownership by contributors, there is a risk that the authorities will speculate on the lack of information and nationalise the funds accumulated in P2, as has happened in Poland and Hungary

Focusing discussions on the full transition to capitalisation

The first step is to inform the public about the real situation of the pension system (combined with a basic financial education). The information provided by the National Public Pension Fund regarding contributions made through an online managed account is a step in the right direction (National Public Pension Fund 2022b).

Another important step is updating the estimates regarding the amount of the implicit public debt related to the public pension system, and communicating and displaying them alongside the explicit public debt, on several official websites – such as those of the Ministry of Finance and the National Bank of Romania – and not only in the depths of the INS website.

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118 For example, in 2017, N.N. Pensii sent a letter to clients about the existence in the public space of some discussions regarding a possible decision to nationalise Pillar 2 and recommended that they inform themselves. The ASF's reaction was very quick: it withdrew the license of Mrs Raluca Țintoiu, the general director of N.N. Pensions. Even though she later won the ASF lawsuit, her reputation was tarnished. Dumitrache, A. 2018. Țintoiu, subiectul celei mai dure amenzi aplicate pe fondul scandalului politic privind naționalizarea pensiilor private, a câștigat procesul cu ASF. Posibilitate de atac, *Profit.ro*, 16 October 2018 (https://www.profit.ro/povesti-cu-profit/financiar/asigurari/ultima-ora-tintoiu-subiectul-celei-mai-dure-amenzi-aplicate-pe-fondul-scandalului-politic-privind-nationalizarea-pensiilor-private-a-castigat-procesul-cu-asf-posibilitate-de-atac-18580712).

Unfortunately, what one of the authors said at the time of the launch of private pension funds remains valid:

> The complete abandonment of the pay-as-you-go pension system and the transition to the capitalisation system, doubled by the state's assumption of the "public debt" to the current pensioners, would represent the true pension reform in Romania. […] The solution would involve the calculation of the explicit and implicit obligations assumed by the Romanian state towards pensioners and employees. They would be explicitly assumed and recognized as a public debt. Its repayment, staggered over time, would be made by all citizens. The `price` paid by citizens would thus be explicit and not masked, as it is now. It would be the price of getting out of the partition trap and gaining autonomy from the state.[119]

9.5 Conclusions

Many taxes are introduced with the motivation of public utility, public health, the interest of the citizens, or the fulfilment of other important objectives of a social nature. Many times, after a closer analysis, we find that the main, and sometimes the only, objective they actually fulfil is that of collecting revenues for the state budget.

Even if we accept the objectives of taxation as legitimate and identify situations where they would be fully met by taxation, ultimately the reality is that taxation reduces the purchasing power of citizens.

Moreover, taxation is supplemented by non-fiscal regulations, which make companies' activities more difficult or create barriers to the entry of new operators into the market. This leads to higher prices and less competitiveness in the international market. In the field of energy, if during this period the state increases the level of regulation and the level of taxation, it will lead to an increase in costs. Capping keeps prices artificially low in the present, but it does so by shifting those costs into the future, either directly, through compensation, or indirectly, through the aforementioned loss of competitiveness.

Although regulations in the telecommunications sector are varied, in practice they do not restrict competition. Consumers benefit because the

119 Nechita, R. 2007. Rol decorativ pentru fondurile de pensii, *Săptămâna Clujeană*, 14 May 2007.

level of regulation is lower than it is in other fields, barriers to market entry were very few before the establishment of ANCOM, and products and services are not overtaxed.

A large number of Romanian citizens who have difficulty achieving a decent standard of living are pensioners. This situation is a direct consequence of the structure of the state pension system, which gives them relatively small amounts compared to the value of the contributions they have paid during their working life. If they were invested in a capitalised pension system, the resulting pensions would be much higher.

Inflation is a negative factor with a major impact on citizens, but it affects those with the lowest incomes the hardest. Curbing inflation is essential to protect the savings and the well-being of the population. Beyond monetary policy measures, all non-monetary instruments at our disposal must be used as soon as possible in order to safeguard our standard of living.

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