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Inflation in Greece in the post-COVID era

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The present dissertation entitled

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Abstract

This dissertation investigates the inflationary episode in Greece during 2020-2024, a period marked by the COVID-19 pandemic, the energy crisis, and the war in Ukraine. These overlapping shocks created the steepest global surge in prices in decades, with particularly acute consequences for small, open economies such as Greece. The study seeks to disentangle the determinants of both headline and core inflation, distinguishing between supply- and demand-side influences and situating the Greek experience within the broader European and international context.

The analysis demonstrates that Greek inflation was primarily supply driven with external shocks, especially soaring international energy and food prices, acting as the dominant forces. Greece's structural dependence on imported energy amplified its vulnerability, while food inflation proved unusually persistent, surpassing headline inflation and disproportionately burdening lower-income households. Demand-side pressures, such as pent-up consumption following the pandemic lockdowns and government support programs, contributed to inflation mainly in 2021-2022 but proved less durable.

Policy responses, including subsidies such as the Fuel Pass and Power Pass, provided temporary relief but were fiscally costly and ineffective in curbing underlying inflation. Moreover, evidence of widening profit margins in several sectors highlighted the role of imperfect competition and raised concerns about the contribution of profit-led dynamics to price persistence.

Overall, the findings underscore that Greece's inflationary surge was driven above all by global supply disruptions, with domestic structural weaknesses amplifying their impact. The dissertation concludes that achieving lasting price stability requires targeted support for vulnerable households, stronger regulatory oversight to prevent excess profits, and long-term reforms aimed at energy diversification, improved competitiveness, and enhanced economic resilience.

Περίληψη

Η παρούσα διπλωματική εργασία εξετάζει το πληθωριστικό ‘επεισόδιο’ στην Ελλάδα κατά την περίοδο 2020-2024, μια περίοδο που χαρακτηρίστηκε από την πανδημία COVID-19, την ενεργειακή κρίση και τον πόλεμο στην Ουκρανία. Οι αλληλεπικαλυπτόμενοι αυτοί κραδασμοί (σοκ) προκάλεσαν τη μεγαλύτερη παγκόσμια άνοδο τιμών εδώ και δεκαετίες, με ιδιαίτερα έντονες συνέπειες για μικρές, ανοικτές οικονομίες όπως η ελληνική. Στόχος της μελέτης είναι η αποσαφήνιση των προσδιοριστικών παραγόντων τόσο του γενικού όσο και του δομικού πληθωρισμού, διακρίνοντας μεταξύ επιρροών από την πλευρά της προσφοράς και της ζήτησης, και εντάσσοντας την ελληνική εμπειρία στο ευρύτερο ευρωπαϊκό και διεθνές πλαίσιο.

Η ανάλυση καταδεικνύει ότι ο πληθωρισμός στην Ελλάδα ήταν κυρίως οδηγούμενος από την πλευρά της προσφοράς, με τους εξωτερικούς κραδασμούς, ιδίως τη ραγδαία αύξηση των διεθνών τιμών ενέργειας και τροφίμων, να λειτουργούν ως κυρίαρχες δυνάμεις. Η διαρθρωτική εξάρτηση της Ελλάδας από εισαγόμενη ενέργεια ενέτεινε την ευπάθειά της, ενώ ο πληθωρισμός στα τρόφιμα αποδείχθηκε ασυνήθιστα επίμονος, υπερβαίνοντας τον γενικό πληθωρισμό και επιβαρύνοντας δυσανάλογα τα νοικοκυριά χαμηλότερου εισοδήματος. Οι πιέσεις από την πλευρά της ζήτησης, όπως η συσσωρευμένη κατανάλωση μετά τα περιοριστικά μέτρα της πανδημίας και τα κρατικά προγράμματα στήριξης, συνέβαλαν στον πληθωρισμό κυρίως την περίοδο 2021–2022, αλλά αποδείχθηκαν λιγότερο διαρκείς.

Οι πολιτικές παρεμβάσεις, συμπεριλαμβανομένων επιδοτήσεων όπως το Fuel Pass και το Power Pass, παρείχαν προσωρινή ανακούφιση, αλλά αποδείχθηκαν δημοσιονομικά δαπανηρές και αναποτελεσματικές στον περιορισμό του υποκείμενου πληθωρισμού. Επιπλέον, ενδείξεις διεύρυνσης των περιθωρίων κέρδους σε διάφορους κλάδους ανέδειξαν τον ρόλο του ατελούς ανταγωνισμού και προκάλεσαν ανησυχίες για τη συμβολή των δυναμικών κερδοσκοπίας στη διατήρηση υψηλών τιμών.

Συνολικά, τα ευρήματα υπογραμμίζουν ότι η πληθωριστική έξαρση στην Ελλάδα προκλήθηκε πρωτίστως από τις παγκόσμιες διαταραχές στην προσφορά, με τις εγχώριες διαρθρωτικές αδυναμίες να ενισχύουν τις επιπτώσεις τους. Η διατριβή καταλήγει ότι η επίτευξη διαρκούς σταθερότητας τιμών απαιτεί στοχευμένη στήριξη των εύάλωτων νοικοκυριών, ισχυρότερη ρυθμιστική εποπτεία για τον περιορισμό των υπερκερδών, καθώς και μακροπρόθεσμες μεταρρυθμίσεις που θα στοχεύουν στη δια-

φοροποίηση των πηγών ενέργειας, στη βελτίωση της ανταγωνιστικότητας και στην ενίσχυση της οικονομικής ανθεκτικότητας.

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Chapter 1

Introduction

1.1 Introduction

The resurgence of inflation as a central economic challenge has become one of the defining features of the early 2020s. After nearly two decades of subdued price growth and relative stability in advanced economies, a confluence of extraordinary shocks disrupted this stability. The COVID-19 pandemic initially triggered a deep recession accompanied by deflationary pressures, but the subsequent reopening of economies coincided with unprecedented supply chain disruptions, an international energy crisis, and heightened geopolitical tensions following the war in Ukraine. Together, these forces generated the steepest global inflationary surge in decades, compelling households, firms, and policymakers to confront price dynamics that many had considered consigned to history.

Within this broader international context, Greece presents a particularly revealing case study. During the 2010s, the country often experienced minimal or even negative inflation, shaped by the prolonged debt crisis and stringent fiscal adjustment programs. However, from 2021 onward, Greece became acutely exposed to inflationary pressures. Its high dependence on imported energy, the persistence of structural weaknesses in product and labor markets, and its fragile post-pandemic recovery left the economy highly vulnerable to external shocks.

The inflationary surge thus intersected with a society still grappling with the socioeconomic scars of austerity, amplifying both the economic and political salience of rising prices.

The importance of studying Greece lies in three interrelated dimensions. First, the magnitude of the inflationary episode raises questions about the transmission of global supply shocks in small, open economies with limited domestic production capacity. Second, the coexistence of rapid inflation with an incomplete recovery from the pandemic created distributional strains, especially for lower-income households disproportionately burdened by food and energy price increases. Third, understanding the drivers of Greek inflation contributes to the wider debate within the Euro Area, where member states share a common monetary framework but differ markedly in structural vulnerabilities, fiscal capacity and resilience.

Against this backdrop, the present dissertation examines the evolution of inflation in Greece between 2020 and 2024. It seeks to disentangle the relative weight of supply-side and demand-side factors, analyse the persistence of food and core inflation, and assess the roles of profit margins, expectations, and policy interventions.

Methodologically, the analysis adopts a narrative approach, focusing on descriptive statistics, visual analysis of inflation dynamics and qualitative interpretation. Rather than employing complex econometric models which are limited by data availability for the Greek case, the study draws on existing economic theory by a review of recent academic literature, institutional reports, and interpretations in the popular Greek economic press to contextualize the observed inflation dynamics. This method allows for a broader understanding of both the measurable data and the ways in which inflationary pressures have been framed in public debate.

By situating the Greek case within the broader European and international experience, the dissertation aims not only to document the trajectory of inflation primarily through an institutional and narrative framework informed by popular

economic press but also to derive insights with relevance for policy design, crisis management, and the pursuit of long-term economic resilience, that is, strengthening Greece's ability to withstand external shocks, adapt to structural vulnerabilities, and sustain stable growth in the face of future disruptions.

The remainder of this dissertation is structured as follows. Chapter 2 reviews the relevant literature, focusing on the drivers of post-pandemic inflation in Greece, the Euro Area, and internationally, with attention to both supply and demand-side factors. Chapter 3 outlines the methodological approach, describing the data sources, indicators, and analytical framework employed. Chapter 4 presents the empirical analysis, highlighting the evolution of headline and core inflation in Greece, its comparison with the Euro Area, and the role of expectations and profit margins. Finally, Chapter 5 concludes by summarizing the key findings, drawing policy implications, and discussing limitations as well as directions for future research.

Chapter 2

Literature Review

2.1 Background

The period 2020-2024 has been marked by a sharp and persistent increase in inflation, both in Greece and globally, after two decades of relative price stability. This literature review aims to examine the drivers, dynamics, and implications of post-pandemic inflation in Greece, in relation to international developments and policy responses.

The objective of this review is to synthesize the main findings from the recent economic literature that analyzes the key contributing factors - including demand-side and supply-side shocks - as well as the sectoral impact of price increases (e.g., energy, food, wages), and the effectiveness of fiscal and monetary interventions implemented during this period.

Sources were selected from recent studies published by official institutions, peer-reviewed journals, and selected working papers released between 2020 and 2024.

2.2 Inflation in Greece

2.2.1 Food Prices and Fiscal Effects

[Bragoudakis et al. \(2024\)](#) investigate how long food prices stayed high in Greece and the Eurozone between 2021 and 2024. In 2023, food inflation in Greece was 12.6%, more than twice the headline inflation (4.1%). In the Eurozone, food inflation was 12.0% compared to 5.4% headline inflation. The same pattern appeared in 2022 (11.9% vs. 9.3%) and in 2021 (3.0% vs. 1.2%).

The analysis shows that food price increases lasted longer in Greece than in the Eurozone during this period. This is measured by a “price persistence” index, which shows how slowly prices return to normal after a rise (values closer to 1 mean prices stay high for longer). In Greece, the persistence index was 0.88 for unprocessed food and 0.86 for processed food, compared with 0.85 and 0.82 in the Eurozone. This means that once food prices went up in Greece, they stayed high for longer before falling or stabilizing.

The main reasons for rising food prices were higher energy (40% of the total increase), higher global grain prices and extreme weather (30%), and rising wages and labor costs, especially for lower-paid workers (20%). This increase hit low-income households hardest, widening inequality and creating more pressure for government support measures, which added to public spending.

[Lazaretou and Palaiodimos \(2023\)](#) examine the macro-fiscal implications of inflation in Greece during the recent crisis using a Bayesian VAR framework. Their analysis focuses on the differences between supply-driven and demand-driven inflationary shocks. The results show that supply-driven shocks, mainly caused by the energy crisis, had a negative impact on the primary balance, reducing it by an average of 0.5 percentage points of GDP.

On the other hand, demand-driven shocks had a neutral or slightly positive fiscal effect, improving the primary balance by around 0.2 percentage points of

GDP through higher Value Added Tax and indirect tax revenues. Energy prices were identified as the strongest driver of supply shocks, where private consumption was the main source of demand shocks.

Although the model offers useful fiscal insights, it focuses only on short and medium term effects and does not consider long-term structural changes in how taxes and spending respond to economic conditions.

2.2.2 Underlying Inflation Dynamics

[Kofina and Petroulakis \(2023\)](#) apply the shock decomposition framework of [Shapiro \(2022\)](#) to Greek inflation data to identify the contribution of supply and demand forces. The results show that supply shocks accounted for roughly 70% of the increase in core inflation, while demand shocks contributed about 20%, and residual factors made up the remaining 10%. For headline inflation, supply shocks also dominated, explaining over 60% of the rise, with demand shocks contributing only 15–20%. The main sources of supply shocks were increases in energy prices and the cost of imported goods, which pushed up both production costs and consumer prices.

Their findings challenge the common belief that inflation in Greece was mainly caused by strong demand. By analyzing the sources of inflation, they show that core inflation was mostly due to cost-push factors, not excessive demand. This has important implications for whether tighter monetary policy was the right response at that time.

[Hazakis \(2022\)](#) offers a broader macroeconomic perspective on the challenges facing the Greek economy after the COVID-19 crisis. The paper highlights that Greece entered the inflation crisis with structural problems from the previous decade of austerity like underfunded public services, high unemployment, and weak competitiveness. These issues made it harder for the country to deal with inflation shocks effectively. According to the results, real GDP grew by 8.4% in 2021, driven by a strong rebound in private consumption and investment, but

slowed to 5.9% in 2022 as the energy crisis and high inflation took place. The Harmonised Index of Consumer Prices (HICP) rose sharply, from 0.6% in 2020 to 9.3% in 2022, marking the highest rate in decades.

Instead of looking only at how inflation works, [Hazakis \(2022\)](#) looks at how strict budgets, Eurozone rules, and global uncertainty combine and influence the economy. He argues that without targeted reforms and more flexible fiscal policies, inflation could make existing problems worse especially for low-income and unemployed people.

Although the article does not use an empirical model, it provides important context for understanding why Greece may have experienced a more persisting inflation impact compared to other advanced economies.

2.2.3 Political Economy and Labor Market Aspects

[Theodoropoulou et al. \(2024\)](#) examine how inflation was managed in Greece from a political economy perspective, looking at how rules, elections, and government decisions interacted. They argue that Greek policymakers mostly gave general financial help and subsidies to deal with inflation, instead of solving deeper problems like relying on imported energy or how wages are decided.

In 2022, headline inflation in Greece peaked at over 12%, one of the highest rates in the Eurozone. To solve the impact of rising energy and food prices, the government launched a support package worth approximately €13 billion euros (around 7% of GDP). Around 80% of this support went to energy subsidies, with the rest used for tax cuts and targeted payments to households. These measures helped to lower energy price inflation in the short term but had little effect on overall inflation.

This study adds an important perspective to the literature by looking not only at the economic effects but also at the political factors that shape how inflation works in a small country like Greece.

[Theofilakou and Vasardani \(2024\)](#) study how the Greek labor market

changed after the pandemic. They show that even though overall unemployment stayed high (11.1% in 2023, above the euro area average), some sectors faced worker shortages, which increased wage. These sector-specific labor shortages may have contributed to rising prices, particularly in services and construction.

The authors argue that labor market tightness in Greece is due to both the economic recovery and deeper problems like mismatches between available skills and job needs. This means that inflation isn't only caused by external factors like global supply shocks, but also by issues inside country's labor market.

This study helps us better understand inflation in Greece by connecting rising prices to problems in the job market. However, the analysis could be improved by combining these labor trends with wider economic models to measure their full effect on inflation.

2.2.4 Review based on the Central Bank of Greece

As noted by the Bank of Greece in its annual reports [Bank of Greece \(2020, 2021, 2022, 2023, 2024, 2025\)](#), inflation evolved through three phases during 2020-2024. The evolution of inflation in Greece during the period 2020-2024 follows a path starting from deflation, caused by the COVID-19 pandemic, to historically high inflation in 2022 due to the energy crisis, followed by a gradual deceleration, with persistent pressures on essential goods and services.

In 2020 the Harmonised Index of Consumer Prices (HICP) had an average annual decline of -1.3% and core inflation fell to -1.8% in the second half of the year. The COVID-19 pandemic caused economic problems in Greece, with GDP falling by about 9% and household spending by 5.5%. Long lockdowns reduced demand a lot and prices went down in tourism, transport, and restaurants. Global oil prices dropped by around 35%, fact that lowered energy costs. At the same time government took measures such as cutting VAT and waiving rents. **In 2021** restrictions ended and the economy reopened so inflation turned positive at 0.6%. Higher global energy demand, rising oil prices, and supply chain problems pushed

prices up in many sectors. The Bank of Greece says that a 1% rise in prices of goods and services brought from abroad adds about 0.15 percentage points to the inflation rate (HICP).

In 2022 inflation hit its peak, with the average annual HICP at 9.3%, the highest level since 1995. On a monthly basis, inflation peaked at 10.5% in May. Russia's invasion of Ukraine caused energy prices to jump, with the energy costs increasing by 50.8% in the first five months. Higher energy prices spread to food, manufactured goods, and services, pushing core inflation up to 3.3%. Food prices peaked at the end of the year, rising by around 12% in December due to global increases in cereal, oil, and meat prices.

In 2023 inflation fell to 4.2%, mainly because energy prices dropped and shipping and raw material costs also went down. However, food prices went up by 11.7%, hitting low-income households. In less competitive sectors, companies increased profit margins, while labor costs per unit went up by 5.5% (with productivity up 1%), keeping inflation pressures in the economy.

In 2024 inflation dropped to 2.9%, while core inflation stayed high at 3.6%. This slowdown was due to stable global energy prices and smoother supply chains. However, food prices still rose by 6.6%, putting pressure on household budgets. The Bank of Greece warns that in 2025, risks could come from unstable global energy markets, geopolitical tensions, and rising wages in sectors with high demand.

Overall, from 2020 to 2024, the economy moved from deflation caused by a drop in demand, to inflation mainly driven by supply problems and higher import costs, and then to a gradual slowdown, with ongoing price pressures in certain key goods and services.

2.2.5 Profit Margin Dynamics (“greedflation”) in Greece

Greedflation is the idea that companies use inflationary periods as an excuse to raise prices more than necessary not just to cover rising costs, but to increase profit margins. This concept links inflation to corporate pricing power, suggesting

that in times of crisis or supply shocks, firms may exploit reduced competition or inelastic demand to boost profits. While debated, it reflects growing concerns that part of recent inflation surges may be driven by opportunistic behavior rather than purely economic fundamentals.

[Krompas \(2023\)](#) attempts to quantify “greedflation” but finds limited evidence in Greek data. When using refined metrics (Net Operating Surplus of Non-Financial Corporations), unit profits were found to be within historical norms peaking slightly in 2022 due to energy sector windfalls but not broadly inflated, so corporate profits remained stable. Markups remained mostly flat, since they increased modestly (by 3%) in 2021, but this was largely due to temporary business support measures, not opportunistic pricing behavior. In most sectors, price increases tracked closely with cost increases. Demand side inflation is considered significant with up to 50% of inflation driven by demand side factors, including aggressive fiscal support during COVID-19 and the energy crisis, plus high spending from the EU’s Recovery and Resilience Facility (RRF). The paper discusses policy risks: misdiagnosing inflation as “greedflation” could lead to misdirected policy, for example, unnecessary market regulation or untargeted financial support, which may fuel further demand-side inflation. Summing up, this study argues that inflation in Greece was not driven by greedflation but by cost-push factors and demand surges. Policy responses should focus on targeted aid, productivity reforms, and balanced fiscal discipline rather than solely regulating corporate margins.

On the contrary, in an article published in popular economic press (*Oikonomikos Taxydromos*¹) that discusses and summarizes a 2024 Greek Parliamentary Budget Office (GPBO) report, the role of greedflation is prominent.

According to the quarterly report of the PGPBO, “greedflation” has been much more intense in Greece than in the rest of the Eurozone. Over the last four years, it has been running about **5.5 (five and a half) times higher** than the corresponding figure for the Eurozone as a whole. This finding suggests that

¹[Oikonomikos Taxydromos - 27th June 2024](#)

competition in the Greek market is not functioning effectively, leaving consumers disproportionately burdened because firms both pass on cost increases and raise profits beyond them.

The analysis examines the increase in the GDP deflator by separating the contributions of wages and labor costs on the one hand and corporate profits on the other. The aim is to identify which factor has been more decisive in driving prices upward, especially since the pandemic and the war in Ukraine, which intensified inflationary pressures. For Greece, between the fourth quarter of 2019 and the first quarter of 2024 (2019Q4-2024Q1), overall inflation as measured by the GDP deflator rose by around 16%. Of this increase, roughly **9 percentage points** can be attributed to profit margins per unit of product, while unit labor costs (wages plus employer social contributions) accounted for about **4.1 points**.

In contrast, for the eurozone over the same period, the picture is reversed. Labor costs explain about 10% of inflation, while profits contribute only around 1.7 percent. More recently, however, the Greek pattern has shifted. From the first quarter of 2023 to the first quarter of 2024, the contribution of profits has diminished while that of wages and labor costs has grown. For that year-long span, labor costs explain roughly 1.65 percent of the 2.8 percent increase in the GDP deflator, while profits account for only about 0.8 percent.

Looking ahead, the GPBO estimates that Greece's economy will grow by around 2.5 percent in 2024, with inflation expected at about 2.8 percent. The report also discusses policy measures to address persistent high prices, such as proposals to cut indirect taxes like VAT, especially on food. But the evidence suggests that VAT reductions do not translate effectively into lower consumer prices. On average, only around six percent of a VAT cut is passed on to prices, and even then only temporarily. By contrast, increases in VAT are passed on to consumers at a much higher rate, roughly 34 percent. Moreover, after a VAT cut, prices typically return to their earlier levels within ten months. In practice, VAT reductions tend to expand company profit margins rather than deliver long-lasting relief to

consumers.

For that reason, the report argues that deeper structural changes are necessary. These include strengthening competition in the Greek market, removing bureaucratic obstacles that prevent new firms from entering, and empowering consumers through digital tools that allow them to compare prices and product characteristics more easily. Only with such reforms, it suggests, will consumers be able to make more rational choices and force firms to compete more effectively.

On the fiscal side, while higher inflation has temporarily boosted government revenues, the Budget Office expects this effect to fade. The target for the primary budget surplus in 2024 is set at 2.1 percent of GDP, and the Office considers it achievable provided there are no extraordinary fiscal interventions and that the budget targets are adhered to strictly.

Finally, the report notes that Greece's outlook is also shaped by external risks and longer-term challenges. Political developments in Europe, such as heightened uncertainty in France, create a volatile environment. At the same time, Greece must deal with structural weaknesses, including a significant investment gap, as well as future pressures on production and the environment stemming from climate change.

2.2.6 Cost-push and Profit-led inflation in Türkiye

[Yilmaz and Bulut \(2025\)](#) highlight that recent inflation in Türkiye was primarily **supply-side driven**, with a strong **cost-push** mechanism linked to **exchange rate depreciation**. The lira's persistent weakness, exacerbated by the government's low interest rate policy magnified import costs, which fed directly into domestic price increases. Structural vector autoregression (SVAR) analysis showed that shocks to import prices had large and highly persistent effects, influencing inflation for up to three years. Unlike classical narratives of wage-price spirals, **wage dynamics played little role**, as low unionization and high unemployment weakened labor's bargaining power. **This created a situation where external**

price pressures and monetary policy choices pushed inflation upward without significant wage contributions.

Profit-led inflation emerged as the second major driver in Türkiye. The authors show that firms used the inflationary environment to expand profit margins and markups, which surged from around 30 percent before 2018 to nearly 80 percent by 2023. Decomposition of both GDP and consumption deflators revealed that profits consistently contributed more to inflation than wages, with profit shares explaining about 40 percent of the consumption deflator increase in 2021–2022, equal to the contribution of import prices. Labor costs, in contrast, accounted for only about 20 percent. Sectoral analysis demonstrated that services and manufacturing sectors were particularly central to profit-led inflation, as firms with concentrated market power leveraged their dominant positions to pass costs onto consumers and protect profits.

The paper also situates Türkiye within broader global patterns. In the euro area, **profits accounted for over half of the GDP deflator increase** in late 2022, and the OECD similarly documents rising profit contributions across countries such as **France, Italy, Spain, and the UK**. In the **United States**, markups explained more than half of inflation in 2021, though their role declined by 2022. **Italy** provides another parallel, where shocks to import prices were shown to persistently raise both domestic prices and profit shares. These comparisons suggest that while Türkiye’s inflation has been unusually severe, the mechanisms of supply-side pressures and profit-driven markups are shared features of inflationary dynamics across advanced and emerging economies.

2.3 Inflation in the Eurozone

2.3.1 Profit Margin Dynamics

[Sideris and Pavlou \(2024\)](#) investigate if higher company profits played a role in pushing up inflation in euro area countries after the pandemic. Using data from

different firms and sectors, they find that in areas like energy, food retail, and manufacturing, companies with strong market power were able to raise prices to cover higher costs and still increase their profits. In some of these sectors, profit margins accounted for about 45–50% of the total price increase in 2022, with unit profit margins rising by 4–6 percentage points year-on-year. In markets with less competition, this profit-driven inflation was up to twice as high as in competitive ones.

This finding supports the idea of “greedflation” that inflation wasn’t just caused by outside factors or higher wages, but also by companies using their power to raise prices. Dickens (2022)² discusses that rising profit margins didn’t happen everywhere or last in all euro area countries or sectors. So, even though market power made inflation worse in some industries, it doesn’t fully explain the overall rise in inflation.

2.3.2 Supply vs Demand Drivers

Pasimeni (2022) provides an empirical decomposition of euro area inflation during 2021–2022, to see how much came from supply problems versus strong demand. By comparing changes in prices and output across different sectors, the study finds that energy and food accounted for about 75% of total headline inflation, and supply factors were responsible for at least 80% of the increase in producer prices in the most affected sectors.

Pasimeni (2022) shows that in many sectors, prices went up while output or demand went down. This suggests that inflation was caused more by high costs than by strong demand. It challenges the idea that inflation was mainly due to government spending or low interest rates.

Although this method doesn’t use detailed economic models, it gives a clear way to help policymakers see if inflation comes from global supply problems or

²William Dickens is a university distinguished professor of economics and public policy at Northeastern University. The article can be found at [Northeastern global news - 8th March 2022](#)

from the economy growing too fast at home.

[Ascari et al. \(2024\)](#) examine how global supply chain pressures have affected inflation in the Euro Area and the implications for monetary policy. Using the Global Supply Chain Pressure Index (GSCPI) and Bayesian structural VAR models for the period 2010–2023, with a focus on 2021–2022, they find that in the first half of 2022, supply chain disruptions accounted for approximately 60% of the increase in inflation, while the remaining 40% was mainly due to demand and energy shocks. This means that the impact of these disruptions does not reach its maximum immediately, but peaks about 4–6 months after the initial shock and can last for around a year. In numbers, an “average” large shock to supply chains increases headline inflation by about 0.7 percentage points and core inflation by about 0.4 percentage points. The authors believe that the way a country raises interest rates should depend on how connected it is to global production networks. Countries that rely less on international supply chains can raise rates more aggressively to control inflation, while those that are highly connected should be more careful to avoid making a recession worse.

[Šestořád and Dvořáková \(2025\)](#) analyse why post-pandemic inflation was very high in four Central European countries (Czechia, Hungary, Poland, Slovakia). They used a statistical model called a Bayesian SVAR to figure out how much of inflation came from external factors (like global prices and international demand) and how much came from domestic factors (like local production or exchange rates). The results show that most of the rise in prices was caused by external factors, especially problems with foreign supply (not related to energy) and changes in demand from other countries. Domestic factors, like local supply problems and changes in exchange rates, mainly explain why inflation was different from one country to another.

In 2022, external factors caused more than half of the inflation in most countries, and over 60% in Hungary. Domestic factors contributed 25% to 40%, depending on the country. The authors also find that monetary policy had only

a limited effect on reducing inflation, as central banks followed their usual approach. This pattern is observed for both headline and core inflation, suggesting that the influence of supply and exchange rate shocks was long-lasting, not just temporary.

2.4 International and US Evidence

2.4.1 Minimum Wages and Inflation across OECD Countries

[Bilenkisi et al. \(2024\)](#) study how raising the minimum wage affects inflation in 30 OECD countries after the pandemic. They find that a 10% increase in the minimum wage raises inflation by about 0.87% in the second month, but the effect weakens completely by the eighth month.

The study shows that food prices went up by about 1.2%, starting 1–2 months before the minimum wage increase. At the same time, wages only rose slightly about 0.3% for one month and profits stayed the same, suggesting that companies simply passed the higher labor costs on to consumers.

This study provides evidence among countries on how wages and prices are connected, highlighting important policy trade-offs between income support and inflation management in the post-pandemic period.

2.4.2 Post-Pandemic Inflation in the United States

[Giannone and Primiceri \(2024\)](#) study aims to uncover the fundamental causes behind the surge in U.S. inflation following the COVID-19 pandemic, focusing on the period from early 2021 through early 2023. Using a semi-structural Bayesian Vector Autoregression (BVAR) model, the authors decompose inflation dynamics into three key components: demand shocks, supply shocks, and monetary policy shocks. Their methodology is carefully designed to quantify the relative contri-

butions of these forces while accounting for the inherent uncertainty in macroeconomic relationships, especially during a period as volatile as the pandemic and its aftermath.

The motivation for the study lies in the unprecedented nature of the inflation episode. For decades prior, inflation in the U.S. and other advanced economies remained subdued, with price stability seemingly entrenched. The sudden reemergence of high inflation peaking at levels unseen since the early 1980's confounded policymakers and analysts. The Federal Reserve initially attributed the inflation to transitory supply bottlenecks but later acknowledged that the persistence and breadth of the inflation required more forceful monetary tightening. Against this backdrop, Giannone and Primiceri offer a structured empirical framework to assess what actually drove inflation upward.

Their empirical strategy employs a monthly BVAR model that includes core macroeconomic indicators: real GDP, personal consumption expenditures (PCE), the unemployment rate, inflation (measured by PCE), short- and long-term interest rates, wage inflation, labor force participation, and others. The model includes exogenous variables such as oil prices and pandemic indicators. A key feature is the model's ability to disentangle structural shocks through the imposition of sign and narrative restrictions. For example, supply shocks are assumed to increase inflation and reduce output in the short run, whereas demand shocks increase both inflation and output. Monetary policy shocks, on the other hand, affect inflation and interest rates but have more nuanced real effects depending on the policy stance.

The main finding of the study is that **demand shocks were the primary driver of the inflation surge** in the post-pandemic period. These shocks accounted for the bulk of the increase in core inflation in both goods and services, especially in 2021 and early 2022. The authors attribute these demand shocks to the combination of **unprecedented fiscal support, pent-up demand during lockdowns, and extremely accommodative monetary policy**. Households,

flush with stimulus checks and increased savings, shifted consumption patterns rapidly, particularly toward goods, while services remained constrained due to public health concerns. This demand boom created strong upward pressure on prices, particularly in goods markets.

Supply shocks also played a role, especially in the earlier phases of the inflation episode. These included disruptions in global supply chains, labor force participation declines due to illness or caregiving responsibilities, and bottlenecks in key industries such as semiconductors and shipping. The supply-side effects were especially relevant for specific components of the Consumer Price Index (CPI), such as automobiles, where limited inventories met with strong consumer demand. However, Giannone and Primiceri’s model suggests that **the contribution of supply shocks to aggregate inflation was smaller and more transitory** compared to demand factors.

Monetary policy shocks had a relatively minor direct role in the inflation surge, though they became increasingly relevant in 2022 and 2023 as the Federal Reserve began raising interest rates aggressively. In fact, the authors argue that monetary policy’s failure to tighten earlier contributed indirectly to the persistence of inflation by allowing demand-driven price increases to embed themselves in expectations and wage dynamics. However, as the tightening cycle progressed, the model captures the dampening effect of higher rates on demand and inflation. Importantly, the authors emphasize that **monetary policy lags are significant**, and their estimates imply that most of the disinflationary effects of the Fed’s actions will materialize only gradually, well after 2023.

Another key insight of the paper concerns **sectoral inflation dynamics**. The authors analyze core goods versus core services inflation separately. They find that the initial spike in **goods inflation** was driven almost entirely by demand shocks, amplified by temporary supply constraints. As supply chains normalized, goods inflation receded. Conversely, **services inflation**, which rose more gradually, has proven more persistent and is now sustained by wage pressures and continued

strength in labor demand. This persistence in services inflation poses a particular challenge for central banks, since it is less sensitive to transitory shocks and more reflective of underlying macroeconomic imbalances.

The role of wages is also analyzed in depth. The authors find that wage inflation followed broader price pressures, rather than leading them, suggesting that **wage - price spirals** were not a primary mechanism behind the initial inflation surge. However, as inflation expectations began to rise and the labor market remained tight, **wages started to contribute more meaningfully** to ongoing inflation by 2022. Still, the absence of a strong feedback loop from wages to prices supports the view that inflation can be brought down without triggering a 1970s-style wage - price spiral, provided that monetary policy remains credible.

In their historical decomposition, Giannone and Primiceri show that inflation during the pandemic's early recovery phase was almost entirely accounted for by demand and supply shocks, with a negligible role for monetary policy errors. However, the **prolongation of high inflation into 2022 and 2023** increasingly reflected the delayed response of monetary policy, which allowed demand to remain elevated. This finding supports the criticism that the Fed waited too long to pivot from its accommodative stance.

Overall, the authors conclude that the inflation episode **was not the result of a single factor**, but a combination of unusually large and overlapping shocks. The uniqueness of the COVID-19 pandemic, in terms of both its economic effects and the policy responses it elicited, created conditions that no recent historical episode could fully anticipate. The inflation surge was therefore not a standard macroeconomic shock but a composite event reflecting demand exuberance, supply dislocations, and policy lags.

As a conclusion, the paper demonstrates that post-pandemic inflation was overwhelmingly driven by **aggregate demand shocks**, with **temporary supply disruptions** playing a secondary role and **monetary policy missteps** becoming more relevant only later. While inflation has begun to recede, the authors caution

that persistent services inflation and lagged effects of policy tightening will shape the trajectory going forward. Their work provides a rigorous empirical foundation for understanding this complex inflationary episode and offers valuable guidance for future macroeconomic stabilization policy.

The [Bernanke and Blanchard \(2023, 2025\)](#) paper investigates the origins of the sharp and persistent inflationary surge experienced by the United States starting in 2021. The authors approach the question by constructing and estimating a simple dynamic macroeconomic model focused on nominal wages, consumer prices, and both short and long-run inflation expectations. The model allows them to distinguish between different sources of inflation - those arising from shocks to goods markets (i.e., price increases given wages) and those stemming from labor market conditions (i.e., wage increases due to labor market tightness). Their findings challenge some of the prevailing narratives, especially those that blamed overheated labor markets for the early stages of inflation.

The study begins by noting that most central banks and economic forecasters failed to anticipate the scale of the inflation spike in 2021. Early Federal Reserve projections did not significantly revise inflation forecasts despite the passage of large fiscal stimulus packages, including the CARES Act, the December 2020 relief bill, and the 1.9 trillion American Rescue Plan. The combined size of these measures was about four and a half times the size of the American Recovery and Reinvestment Act of 2009, relative to GDP. Standard models suggested that such fiscal expansion could cause labor markets to overheat and eventually drive inflation. Some analysts, including Blanchard himself, warned of the possibility of overheating, citing the risk of a steepening Phillips curve and a wage-price spiral. Others argued that inflation would remain modest due to the flatness of the Phillips curve and well-anchored expectations after decades of stable prices.

The actual outcome vindicated the inflation pessimists in terms of direction but not mechanism. While inflation did surge, the authors show that its primary causes - at least initially - lay in sharp price increases unrelated to wage pressure.

These included rapid rises in commodity prices, especially energy and food, as well as significant supply-chain disruptions that created shortages in certain goods sectors. Sectoral mismatches between demand and supply, amplified by pandemic-driven changes in consumer behavior, led to price increases in specific industries without offsetting declines elsewhere. For instance, the auto industry experienced severe chip shortages, which constrained vehicle production and pushed up prices sharply. These price shocks drove overall inflation even though wage growth was relatively contained and consistent with pre-pandemic dynamics.

In quantifying inflation dynamics, Blanchard and Bernanke find that wage growth during 2021 and 2022 can be well explained by traditional relationships, particularly the pre-pandemic correlation between wage growth and labor market tightness, measured more accurately in this context by the ratio of job vacancies to unemployment (v/u), rather than the unemployment rate alone. Their analysis confirms that this vacancy-to-unemployment ratio became a better measure of labor market pressure during the pandemic because of changes in the efficiency of job matching. Importantly, they find little evidence of a significant “catch-up” effect, meaning that wages did not rise in response to past unexpected inflation in a way that would create a wage-price spiral.

The authors also carefully examine inflation expectations. Using Cleveland Fed measures for short-run and long-run inflation expectations, they find that both remained remarkably well anchored despite the surge in actual inflation. Short-run expectations reacted modestly to inflation surprises, while long-run expectations hardly moved. This stability in expectations helped prevent inflation from becoming self-reinforcing. Their estimated model includes these expectations explicitly and shows that their influence on wage and price setting is substantial, particularly when expectations are not well anchored.

Nevertheless, the study also finds that labor market tightness did start to contribute more significantly to inflation as the pandemic progressed. Although early inflation was driven by goods market shocks, persistent tightness in the labor

market has increasingly affected nominal wage growth and, by extension, inflation. This evolution implies that, moving forward, inflation will become more sensitive to labor market conditions, making it more persistent and harder to reverse.

The model simulations and impulse response functions presented in the paper further support the distinction between temporary and persistent inflation drivers. A temporary price shock (such as a spike in oil prices) causes a short-lived inflation burst if expectations are well anchored and wages don't respond strongly. In contrast, a sustained increase in labor market tightness results in a gradual but persistent rise in inflation. The longer the tightness continues, the more inflation builds, particularly if expectations begin to de-anchor or if workers begin to demand compensation for real wage losses.

Empirically, the model fits the data remarkably well. Out of sample forecasts for wage growth and inflation over the COVID period match actual outcomes closely. The inclusion of variables such as the relative prices of energy and food, Google-based measures of supply chain shortages, and the vacancy-to-unemployment ratio allows the model to replicate the inflation dynamics of 2020 to 2023 without the need to assume structural breaks or new inflation mechanisms. The authors also perform robustness checks using alternative measures for inflation expectations and find consistent results.

As a conclusion, the paper offers a nuanced account of U.S. pandemic-era inflation. While critics of expansive fiscal policy were right to anticipate inflation, they misattributed its early causes to labor market overheating. Blanchard and Bernanke demonstrate that product-market shocks (especially those related to energy prices, supply chain disruptions, and sectoral demand shifts) were the key culprits at the onset. However, as these effects fade, the persistent tightness in labor markets is emerging as the main driver of inflation. This transition implies that continued monetary tightening will be necessary to rebalance labor supply and demand and return inflation to target. The extent of that adjustment will depend on structural features of the labor market, such as the speed of job matching and

participation rates. Overall, the paper reinforces the importance of integrating both product and labor market dynamics in inflation forecasting and suggests that better anchoring of expectations and real-time measures of sectoral pressures could improve future policy responses.

Blanchard and Bernanke (2023) and Giannone and Primiceri (2024) both examine the surge in U.S. post-pandemic inflation, though they employ different empirical approaches. **Blanchard and Bernanke use a** semi-structural macroeconomic model that integrates wage-price dynamics and expectations, while **Giannone and Primiceri apply a** Bayesian VAR framework to decompose inflation into structural demand, supply, and monetary policy shocks. **Both studies agree that** demand-side forces were the dominant driver of inflation during 2021–2022. **Blanchard and Bernanke emphasize** sector-specific price shocks and later labor market tightness, whereas **Giannone and Primiceri focus on** fiscal-driven demand surges, especially in durable goods. **Supply shocks are found to have played a** transitory role in both studies, contributing temporarily but not driving the persistence of inflation. **Neither paper finds strong evidence of** a wage-price spiral, although **wages became increasingly relevant** in sustaining inflation as the labor market remained tight. **Both papers stress that** monetary policy was too slow to tighten, which prolonged inflationary pressures. **Despite elevated inflation, both find that** expectations remained anchored, helping to prevent a de-anchoring scenario or runaway inflation. **Blanchard and Bernanke explicitly model** price-wage-expectation dynamics, while **Giannone and Primiceri offer a** shock-by-shock historical decomposition of inflation. **Taken together, the two papers provide a complementary view:** inflation was initially demand-led, amplified by supply constraints, and sustained by policy lags.

Rubbo (2023) and **Rubbo (2024)** develops a multi-sector framework, the *Divine Coincidence Inflation (DCI) Index*, which accounts for sectoral heterogeneity in price stickiness, volatility, and supply tightness. This framework highlights

how inflation dynamics are shaped not only by aggregate demand but also by supply constraints across diverse sectors. **Standard inflation measures** can obscure these effects by averaging across sectors that respond very differently to macroeconomic shocks. Rubbo's framework shows that when demand and supply shift unevenly, the sectors with more flexible prices or tighter constraints disproportionately affect overall inflation. **In the early post-COVID period, supply-side issues** like, disrupted supply chains and production bottlenecks, were the dominant contributors to inflation. However, **as recovery progressed, aggregate demand took over** as the main inflationary force, fueled by stimulus and pent-up spending. **Energy prices played a role**, but their contribution was less persistent compared to broad-based demand pressures.

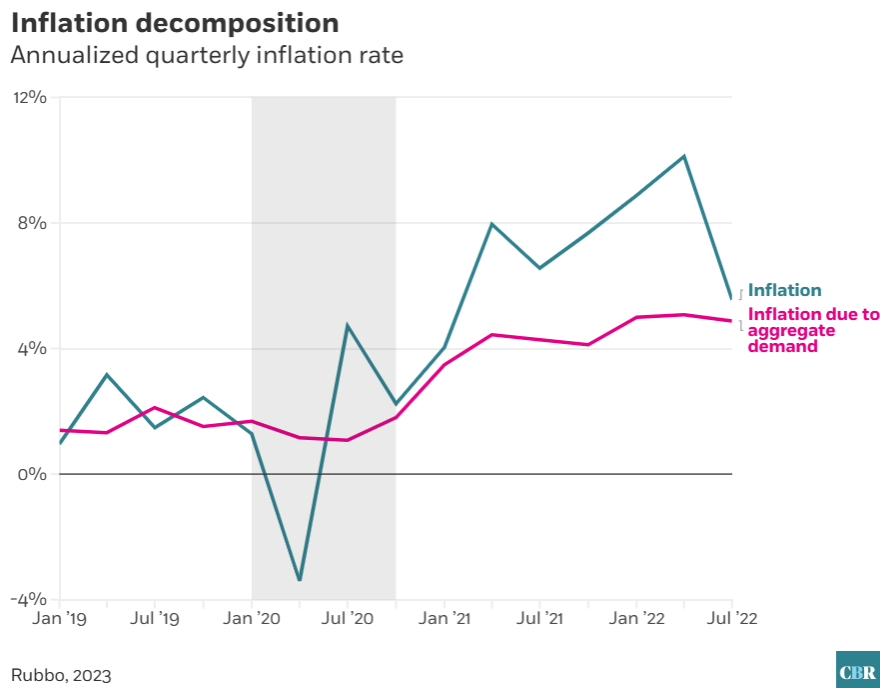


Figure 2.1: Inflation decomposition from Rubbo (2023): Annualized quarterly inflation and its demand-side component.

The policy implication is that monetary policy must address both the overall output gap and sector-specific constraints. Yet, with a single instrument (the interest rate), central banks face challenges in targeting both objectives simultaneously. **Rubbo concludes that demand-side inflation distortions are typically more manageable**, but recognizing sectoral supply issues allows for

more informed and flexible policy responses.

Overall, all these works, [Giannone and Primiceri \(2024\)](#), [Bernanke and Blanchard \(2023, 2025\)](#), [Rubbo \(2023\)](#) and [Rubbo \(2024\)](#), agree that **supply shocks dominated early inflation** but were eventually eclipsed by **demand-driven pressures, particularly fueled by fiscal policy and strong consumer spending**. They also concur that **monetary policy lagged behind**, contributing to inflation persistence. Where they differ is in emphasis: Rubbo brings a unique sectoral decomposition that highlights the importance of understanding microeconomic frictions, while Blanchard & Bernanke and Giannone & Primiceri stay focused on aggregate dynamics and macroeconomic policy responses. Taken together, these papers paint a consistent but multidimensional picture of the pandemic-era inflation experience.

2.4.3 Post-Pandemic Inflation across 11 advanced economies

[Blanchard and Bernanke \(2024\)](#) extends the [Bernanke and Blanchard \(2023\)](#) framework to examine the dynamics of pandemic-era inflation across 11 advanced economies, using a simplified structural model applied in collaboration with ten national central banks. The model captures the joint dynamics of **inflation, wages, inflation expectations, and labor market tightness**, focusing on the role of **exogenous shocks** (e.g., energy, food, sector-specific bottlenecks) and **endogenous wage pressures** in shaping inflation outcomes.

The main findings confirm that across countries, the initial surge in inflation (2021–2022) was driven largely by *relative price shocks and sectoral shortages*, rather than labor market overheating. However, as supply constraints eased and global energy prices normalized, **labor market tightness became a more important contributor** to sustained inflation. This shift mirrors the U.S. experience.

Nonetheless, cross-country variation is substantial: some economies were more exposed to energy shocks, others to goods bottlenecks or labor market

driven wage pressures. The model's fit and policy implications therefore depend heavily on national institutions, wage-setting mechanisms, and labor market structures.

A key insight is the “last mile” problem: even as inflation falls from its peak, returning fully to central bank targets may require further slowing in economies with tight labor markets. Where labor slack is present, disinflation may proceed with less cost.

Country-by-Country Insights

United States: Initial inflation driven by goods shortages and relative price shocks; later sustained by labor market tightness and wage growth.

Canada: Similar to the U.S.; strong fiscal stimulus and tight labor market contributed to persistent inflation in the later phase.

Euro Area: Energy price shocks were dominant; labor market pressures became relevant later, but wage pass-through was more muted due to institutional wage rigidities.

Germany: Especially exposed to energy price spikes; sectoral shortages also played a key role. Limited immediate wage response.

France: Inflation was more moderate; smaller role for labor market pressures; earlier energy subsidies helped cushion shocks.

United Kingdom: Broad mix of supply and demand shocks; Brexit related frictions may have amplified price and wage pressures.

Italy: Energy and food prices were the largest contributors; labor market slack helped contain second-round effects.

Spain: Sectoral bottlenecks and energy inflation dominated; pass-through to wages was relatively weak.

Japan: Supply shocks mattered, but inflation remained lower overall; labor market tightness was modest, and wage dynamics stayed subdued.

Korea: Sharp energy price impacts and supply chain disruptions; labor markets became tight later, but inflation peaked earlier than in many peers.

Australia: Experienced both supply shocks and rapid demand recovery; wages contributed to inflation in the later stages.

Comparison with Bernanke & Blanchard (2023)

- The 2023 paper focused exclusively on the U.S.; the 2024 paper generalizes the framework to 11 countries.
- Both identify early inflation as driven by *relative price shocks*, particularly in goods and energy.
- The 2024 paper confirms that **sectoral bottlenecks were a global phenomenon**.
- Labor market tightness gained importance over time in all countries, as in the U.S. case.
- The strength of wage-price transmission varied, with institutional differences shaping dynamics.
- Some countries had more muted wage responses, reducing the risk of persistent inflation.
- The 2024 paper required model adaptations to local data and institutions, unlike the single-country focus of 2023.
- Both papers emphasize the “last mile” of disinflation, where labor market slack becomes critical.
- The global study supports the core U.S. insight: inflation transitioned from exogenous shocks to endogenous persistence.
- Together, they show the model’s robustness across settings but also highlight the need for **country-specific policy judgments**.

Chapter 3

Methodology

3.1 Methodology

To analyze the dynamics of inflation in Greece during the post-pandemic period, we employ the Eurostat database¹ on the harmonised index of consumer prices (HICP)². The dataset includes two main series: “**headline inflation**” (based on **HICP All Items, Eurostat code: CP00 All-items HICP**) and “**core inflation**”, (based on series with Eurostat code: TOT_X_NRG_FOOD, Overall index excluding energy, food, alcohol and tobacco). Comparable series were also collected for the Euro Area to facilitate comparisons between Greek and Euro Area inflation rates.

We use annualized **year-on-year** (YoY) inflation rates as our primary metric in order to minimize the impact of seasonality, smooth short-term volatility, and align the analysis with the standard policy framework of the European Central Bank (ECB), whose inflation target³ is 2%. Year-on-year measures also provide a clearer long-run perspective that supports structural comparisons between Greece

¹<https://ec.europa.eu/eurostat/web/hicp/database>

²HICP serves two main purposes: it is a measure of price stability for the European Central Bank’s (ECB) monetary policy strategy. The Governing Council of the ECB has defined price stability in terms of the HICP for the euro area. In particular, it focuses on coreinflation and a target for 2%. Second, it is used as an indicator for assessing price convergence regarding a possible accession of a country to the monetary union (euro currency). The HICP is also used for economic analyses and indexing contracts.

³<https://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html>

and the Euro Area.

Moreover, the empirical analysis in this study adopts a **narrative framing**, drawing from recent developments in the popular economic press and relevant public sources to interpret the observed inflation dynamics. This approach is supported by a small number of rigorously constructed graphs, allowing for a concise yet robust interpretation of headline and core inflation trends.

The inflation rates were computed in annualized terms (Year-on-year, YoY) using the following formulas:

$$\pi_t^{YoY} = 100 \times \frac{P_t - P_{t-12}}{P_{t-12}}$$

All transformations were applied to both Greek and Euro Area HICP data. The purpose of this step was to generate consistent and comparable measures of headline and core inflation across time and across the two economies. Descriptive statistics were computed for all inflation indicators to establish baseline patterns in volatility and level, and to assess any convergence or divergence trends between Greece and the broader Euro Area. The computed series were visualized using **gnuplot** through **gretl**'s graphical interface. Three key graphs were created and are presented in Chapter 4:

- **Figure 4.1:** Headline inflation (YoY) in Greece
- **Figure 4.2:** Headline inflation comparison: Greece vs Euro Area
- **Figure 4.3:** Core inflation comparison: Greece vs Euro Area

Additionally, annotations were used to mark significant turning points in the inflation series, such as the onset of the post-COVID inflation surge (June 2021), the peak inflation months (mid-2022), and the periods of disinflation (2023 onward). Inflation benchmarks (1%, 1.5%, and 2%) were also overlaid on the graphs to assess how inflation behaved relative to the European Central Bank's target.

This methodology enabled a structured empirical assessment of Greek inflation dynamics, with particular focus on the distinctions between headline and core inflation, as well as the timing and magnitude of inflation trends compared to the Euro Area.

Chapter 4

Empirical Analysis

4.1 Overview of Findings

The empirical analysis in Chapter 2 highlighted three phases of inflation dynamics in Greece during the period 2020-2024.

In the first phase (2020-2021), inflation stayed low because the pandemic and lockdown caused a recession. From mid-2021 to 2022, inflation rose sharply, with annual inflation peaking close to 10% (and over 11% in some months). This increase was mostly due to outside factors like the energy crisis and higher international food prices.

The second phase (2022-2023) was marked by the persistence of core inflation. Even though overall inflation began to fall as energy prices went down, core inflation stayed high (reaching about 6.5%). This was because higher production costs were passed on to goods and services and food prices kept rising.

The third phase (2023-2024) saw inflation gradually decline, dropping below 3% by the end of 2024. Greece moved closer to the euro area average, but food and services prices stayed high for longer. The analysis shows that Greece was more affected by external shocks, especially from energy and imported food, which led to higher inflation peaks and a slower return to normal levels.

4.2 Connection with the Literature

The results of the empirical analysis are closely connected to the international and domestic literature on post-pandemic inflation. At the euro area level, many studies have shown that price increases were mainly driven by exogenous supply-side shocks, such as energy and food, with a limited role for demand ([Pasimeni, 2022](#); [Bańbura et al., 2024](#); [Ascari et al., 2024](#); [Giannone and Primiceri, 2024](#)). The findings for Greece agree with this view, as domestic inflation was first influenced by imported shocks in energy and global food markets.

A key observation is the persistence of food inflation in Greece, which agree with the results of [Bragoudakis et al. \(2024\)](#), who show that food prices in Greece have a slower decline compared to the euro area average. Similarly, [Kofina and Petroulakis \(2023\)](#) show that it is important to separate supply shocks from demand shocks to understand how core inflation develops, as our results also confirm.

The labor market also matters. [Theofilakou and Vasardani \(2024\)](#) show that after the pandemic, Greece faced sector-specific worker shortages, increasing prices in services and construction. However, as [Bilenkisi et al. \(2024\)](#) note, wage growth was mainly limited to the minimum wage, reducing the risk of a full wage–price spiral.

From a macroeconomic view, [Hazakis \(2022\)](#) show that the pandemic made Greece’s structural weaknesses deeper, increasing its exposure to external shocks. With the same way, [Lazaretou and Palaiodimos \(2023\)](#) show that it matters if inflation comes from supply or demand, because energy subsidies and support measures were very costly for public finances.

Overall, the analysis supports the opinion that post-pandemic inflation in Greece was mainly supply-driven, led by food prices and some labor market pressures. Policies such as fiscal support reduced inflation but did not stop it from being higher and longer in Greece than in the euro area.

4.3 Headline Inflation in Greece

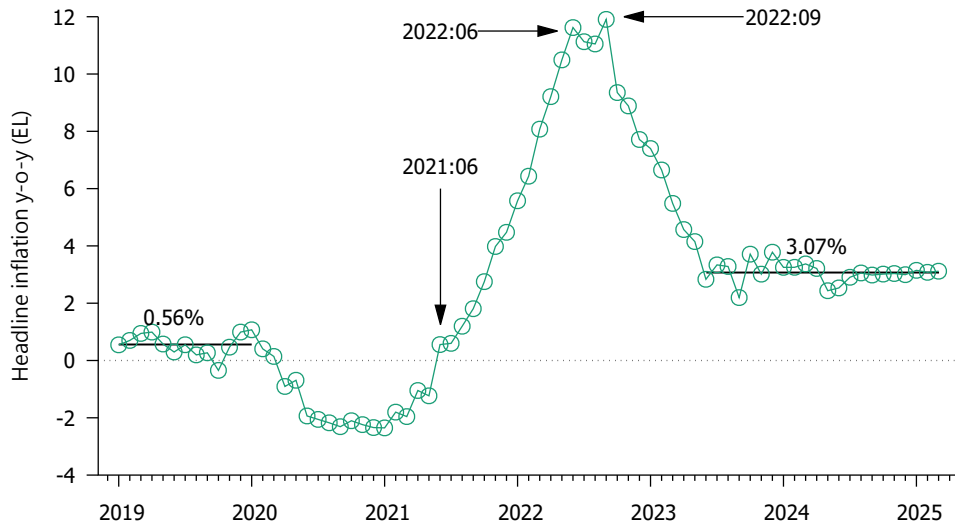


Figure 4.1: Headline inflation (y-o-y) in Greece, 2020-2024.

After a long period of low or even negative inflation during the 2010s, Greece entered 2021 with prices starting to rise again. In the first months of the year inflation remained negative, but by June it turned positive (+0.6%)¹ and reached 1.4% in July². This early increase was connected to higher energy costs (electricity, natural gas, fuels) and food prices, while the devastating wildfires of summer 2021 further pushed up fresh produce prices³.

In autumn 2021 inflation increased significantly. In September it rose to 2.2%, with natural gas prices flying up to 108.5% year-on-year, heating oil by 28.9% and gasoline by 18.1%⁴. In October inflation climbed to 3.4%, with natural gas up by 132% and heating oil by 45.9%⁵. By November it had reached 4.8%, as natural gas prices were almost 181% higher than a year earlier⁶. December 2021 marked a turning point: wholesale electricity prices in Greece exceeded 415 €/MWh, almost five times higher than at the start of the year, creating an unprecedented energy

¹Naftemporiki, June 2021

²Naftemporiki, July 2021

³Capital, August 2021

⁴Naftemporiki, September 2021

⁵Naftemporiki, October 2021

⁶Naftemporiki, November 2021

shock that hit households, businesses and industry⁷.

This trend continued in early 2022. In January inflation reached 6.2%, the highest in 25 years, with natural gas up 155%, electricity 56% and heating oil 36%⁸. Food prices also rose: bread and cereals (+5.4%), meat (+6.9%), vegetables (+7.2%) and olive oil (+15.4%). In February the war in Ukraine triggered a new wave of increases, pushing inflation to 8.9% in April⁹ and into double-digit territory from May onwards (10.2%)¹⁰. The big rise in international prices spread rapidly to food: bread and cereals (+13.4%), meat (+13.8%), dairy (+14.1%), oils and fats (+23.2%).

The summer of 2022 was the peak of the inflation. **June 2022.** For the first time in 29 years, inflation in Greece exceeded 12%. According to data released by the Hellenic Statistical Authority (ELSTAT), inflation in June stood at 12.1%, up from 11.3% in May, and following an article from *naftemporiki* **8-July-2022**¹¹, “with the impact of the war in Ukraine and the energy crisis now clearly reflected in the prices of fuel, food, and transportation”. Moreover, the article sites the Minister of Finance, stating - “yesterday” at the Economist conference - that it cannot be ruled out that inflation may “stay with us” throughout 2023 and possibly into 2024.

The last time inflation in Greece had exceeded 12% was in November 1993, when it stood at 12.3%. During the pandemic, and more specifically in April 2020, it had fallen to -1.4%, while in April 2021 it stood at -0.3%.

According to this article: the main driver of the further increase in inflation in Greece was **once again** the surge in energy prices. Indicatively, on an annual basis, natural gas rose by 117.7%, electricity by 70.4%, heating oil by 65.1%, and fuels-lubricants by 45.6%.

As for food products, in May the sharpest increase was recorded in oils and

⁷Naftemporiki, December 2021

⁸Naftemporiki, January 2022

⁹Naftemporiki, April 2022

¹⁰Naftemporiki, May 2022

¹¹<https://www.naftemporiki.gr/finance/1350033/...>

fats, which rose by 24.9%, followed by bread and cereals (15.9%), dairy products and eggs (15.5%), and meat (14.9%).

Transport costs also registered a significant rise, with airfares increasing by 48.5% and sea transport by 20.4%.

A number of articles were found that discuss the summer of 2022 inflation peak¹², while in September it climbed to 12.1%, well above the euro area average (10%)¹³. Energy was the main reason for higher prices. Natural gas became more than three times more expensive than in 2021, electricity cost 70% more, and fuel 45% more. Industrial goods and metals also became costlier, which raised farming and production expenses. At the same time, the euro lost value against the dollar, making energy imports and fuel even more expensive in Greece, and this increased household costs¹⁴.

Starting in October 2022, inflation began to fall gradually. It dropped to 9.1% in October¹⁵, 8.5% in November¹⁶, and 7.2% in December¹⁷, mainly due to a decline in wholesale energy prices and some stabilisation of fuels. However, food inflation remained very high (+15.5% in December), with double-digit increases in dairy, eggs, oils, bread, meat and vegetables, keeping the cost of living elevated.

Throughout 2023 the trend continued. Inflation fell from 7.1% in January to 5.4% in March¹⁸ and reached around 3% by the end of the year¹⁹. The pressure from energy weakened, but the persistence of food inflation around +14-15% meant that households continued to have strong difficulties.

In 2024, inflation remained stable at lower levels. During the first half of the year it was between 2.4-3.3%, reflecting both the easing of energy prices and the gradual slowdown in food costs. However, food prices remained above the euro area average, showing more persistence in Greece. In the second half of 2024,

¹²[Naftemporiki, June 2022](#)

¹³[Naftemporiki, September 2022](#)

¹⁴[Capital, 2022](#)

¹⁵[Naftemporiki, October 2022](#)

¹⁶[Naftemporiki, November 2022](#)

¹⁷[Naftemporiki, December 2022](#)

¹⁸[Naftemporiki, March 2023](#)

¹⁹[Naftemporiki, end-2023](#)

inflation remained close to 3%, confirming the return to pre-crisis levels.

In early 2025, inflation continues to around 3% (3.1% in February, 3.0% in March). The overall picture suggests that the inflationary shock of 2021-2022 has fully subsided, with headline inflation converging back to the ECB target. Yet, the persistence of higher food inflation compared to the euro area average remains a key structural challenge for Greece.

4.3.1 Consumer Expectations and Confidence in 2021

In parallel with the actual path of inflation, it is also important to examine the expectations of households regarding price developments and their level of consumer confidence, as captured by the monthly Business and Consumer Surveys (BCS/IOBE). In May 2021, the index of price expectations improved to -10.7 points (from -16.0 in April), with 31% of households expecting prices to rise and 49% anticipating stability. At the same time, the consumer confidence index strengthened to -33.6 points (from -40.8), indicating a moderate improvement in expectations, even though 44% still predicted a reduction in major purchases (IOBE, 2021c).

This positive trend continued in June, with the price expectations index rising to -6.3 points, as 33% of households expected price increases and 52% predicted stability. Likewise, the consumer confidence index improved further to -29.6 points, its highest level since the start of the pandemic (IOBE, 2021b). However, from July, the picture changed: while price expectations remained stable (-5.2 points), consumer confidence declined again to -39.2 points, with 48% of households expecting a deterioration in their economic situation (IOBE, 2021a).

In September, the price expectations index jumped to +31 points, as about one in three households expected prices to rise, while consumer confidence dropped to -39.2 points (from -31.8 in August) (IOBE, 2021f). The trend strengthened in October and November, with the price expectations index rising further to +35 and +43 points, meaning almost half of households now expected higher prices. At

the same time, consumer confidence fell to around -45 points, with roughly 60% of households anticipating that their personal finances would get worse (IOBE, 2021e,d).

By December 2021, expectations of higher prices reached their highest point, with the index rising to +47. Half of households expected further increases, while 44% thought prices would remain stable. At the same time, consumer confidence stayed low at -45 points, as about 6 in 10 households anticipated their personal finances would get worse (IOBE, 2022a).

4.3.2 Consumer Expectations and Confidence in 2022

In 2022, household expectations and consumer confidence continued to reflect the strong inflationary environment. In May, the economic climate index for Greece increased to 108.0 points (from 105.1 in April), supported by an improvement in consumer confidence and moderate gains in most sectors. Although inflation pressures were rising, consumer sentiment improved from a 4.5-year low in April, supported by government measures to ease the energy crisis. The Consumer Confidence Index (CCI) in the EU and the Euro area stood at -22.2 and -21.1, with Greek households appearing slightly more positive about major purchases and saving plans (IOBE, 2022c).

By June, however, sentiment weakened again. The climate index fell to 104.3 points, reflecting great declines in industry and retail trade. Consumer confidence slipped close to a four-year low, as concerns over persistent inflation and the war in Ukraine weighed heavily on expectations. The balance of price expectations dropped to +38, with 44% of firms expecting higher prices in the coming quarter (IOBE, 2022b).

In July, the index declined further to 101.1 points, hitting the lowest level in over a year. Consumer confidence dropped to a five-year low, as households became more pessimistic about their personal finances and the overall economy. Many more households expected to cut back on major purchases, while only a few

anticipated stability. At the same time, the balance of price expectations eased to +21, with 62% of firms expecting prices to remain stable and 30

At the end of the year, began a stabilization. In November, the economic climate index improved to 101.4 points (from 98.4 in October), driven by better expectations in retail trade and a rebound in consumer confidence. Households became a bit more optimistic about their economic situation over the next 12 months, and intentions for major purchases improved, although inflation remained a big concern (IOBE, 2022d).

In December, the index increased further to 104.3 points, one of the highest levels of the past nine months. Consumer confidence returned to levels observed at the beginning of the year, reflecting an easing of energy costs and milder winter weather. While pessimism persisted in retail trade and private construction, expectations improved in industry and services. The CCI for the EU and the Euro area stood at -24.4 and -22.2 respectively, suggesting that Greek consumers agree with the broader European recovery in sentiment. (IOBE, 2023).

4.4 Greece vs Euro Area: Headline Inflation

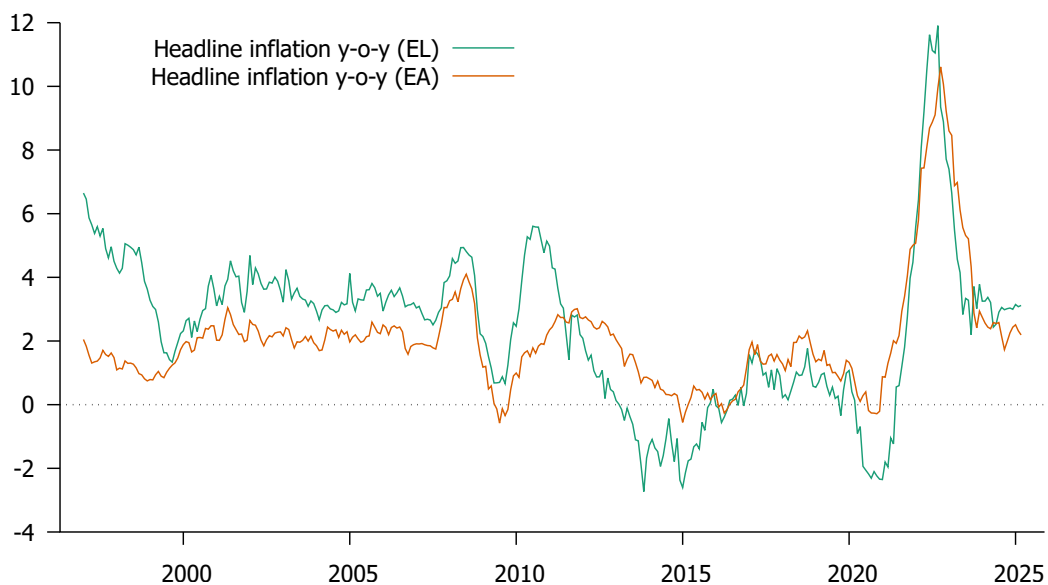


Figure 4.2: Headline inflation (y-o-y) in Greece and the Euro Area.

The path of headline inflation in Greece and the euro area since 2019 can be divided into three distinct phases. Before 2019, Greece had already experienced several years of low inflation or even deflation, particularly during 2013-2016, while the euro area moved more steadily around 1-2%. In 2019, headline inflation in Greece remained very low, between 0.2% and 1% while in the euro area it was around 1.5%.

In 2020, with the pandemic, Greece recorded negative rates, falling to about -2.3% in December, while the euro area also was slightly below zero, to -0.2%. In 2021 Greece inflation increase steadily from negative levels in January to 4.5% in December, while in the euro area it climbed to 5%.

The year 2022 marked the peak of inflation. In Greece, headline inflation reached 11.9% in September, while in the euro area the peak was reached in October at 10.6%. In 2023, a phase of steady disinflation followed. In Greece, inflation fell from 7.4% in January to around 3% in December, and in the euro area from 8.6% to 2.9%.

From 2024 and into early 2025, inflation clearly stayed at low levels. Headline inflation in both Greece and the euro area now stands around 2-3%, very close to the ECB's target, signalling the end of the highly inflationary episode.

4.5 Greece vs Euro Area: Core Inflation

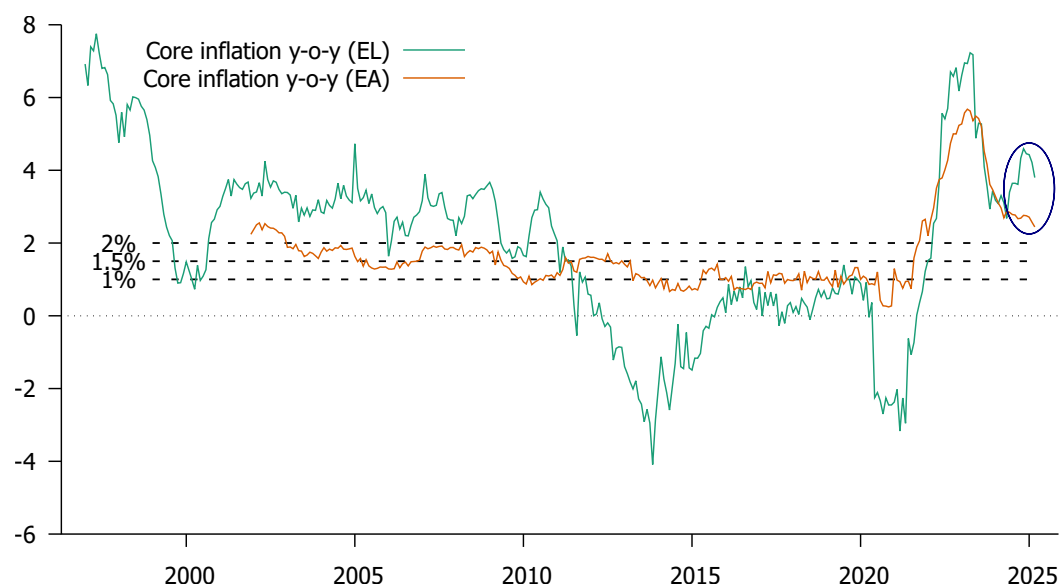


Figure 4.3: Core inflation (y-o-y%), Greece vs Euro Area.

The development of core inflation, which reflects underlying price pressures, also shows significant differences between Greece and the euro area. Before 2019, Greece displayed low or even negative core inflation, while the euro area remained relatively stable around 1-1.5%. In 2019, the Greek core index was between 0.5% and 1.4%, while in the euro area it was slightly above 1%.

In 2020, Greece fell into negative stats, with core inflation reaching -2.7% in September, reflecting the big drop in demand during the pandemic. The euro area, in contrast, remained stable at about 1%. The year 2021 marked the beginning of recovery: in Greece, values returned to positive paths, reaching 1.2% in December, while in the euro area core inflation increased from 0.8% to 2.6%.

In 2022, core inflation recorded a strong increase in both economies. In Greece it climbed close to 7%, peaking at 6.8% in November, while in the euro area it reached 5.2% in December. In 2023, the upward trend continued until spring, when Greece peaked at 7.2% (April-May) and the euro area at 5.7% in March. Afterwards, disinflation followed, with both ending the year at around 3.5%.

In 2024 and early 2025 both series entered a stabilisation phase, but with differences: in Greece core inflation remained slightly higher, around 3-4%, whereas in the euro area was at 2.5-3%. This indicates that, although short-term pressures have eased, structural price pressures remain stronger in the Greek economy.

Chapter 5

Conclusions

5.1 Conclusions

This thesis studied how inflation in Greece evolved during 2020–2024, a period shaped by the COVID-19 pandemic, the energy crisis and wider geopolitical tensions. The findings show that inflation rose sharply, reaching very high levels in 2022, before gradually starting to fall in the following years.

The analysis highlights that supply-side factors played the leading role at the beginning of the inflation surge. The sharp rise in energy prices, the increase in food commodities and the disruptions in global supply chains created strong upward pressures on prices. At the same time, demand-side factors also became important. When the economy reopened, accumulated savings, pent-up demand and fiscal support measures boosted consumption and pushed prices higher, especially in services. Food inflation in particular proved much more persistent than expected, remaining high even when overall inflation started to fall, and this placed an especially heavy burden on households with lower incomes.

Although the pattern of inflation in Greece was broadly similar to what happened in the Eurozone, certain domestic characteristics made the problem worse. The country's high dependence on imported energy and weaknesses in competition in specific markets increased the overall impact. As a result, inflation reduced

the purchasing power of households, widened social inequalities and created extra fiscal pressures, as the government had to intervene with support measures.

In conclusion, inflation in Greece was not only the result of international developments, nor only of domestic factors. It was the combined outcome of global shocks interacting with local weaknesses. Understanding this interaction is crucial for designing effective policies that can bring prices under control, while also protecting growth, public finances and social stability.

5.2 Policy Implications

The results of this thesis have several important implications for economic policy. To begin with, measures against inflation need to be carefully targeted. General fiscal expansions risk making inflation worse, while more focused support for vulnerable households can reduce social hardship without harming economic stability. It is also necessary to strengthen the system of market supervision, so that profiteering practices are limited during crises, when consumers are more exposed.

Another key point is the need for closer coordination between fiscal and monetary policy. The recent experience showed that policy makers must find a balance between keeping inflation under control and at the same time avoiding a deepening of the economic slowdown caused by supply shocks. Structural reforms also play a central role. Reducing dependence on imported energy, improving competition in product markets and making supply chains more efficient are all essential to increase resilience to future shocks. Finally, it is crucial to strengthen social safety nets. Persistent food inflation has a regressive impact, hitting low-income households the hardest, and therefore social protection is vital to safeguard cohesion and stability.

5.3 Limitations and Future Research

Although this thesis makes useful contributions, it also has some limitations that should be recognised. The analysis was based mainly on aggregate data from official statistical sources. These are reliable, but they do not show the differences in how inflation affects specific sectors, firms or households. For this reason, the distributional impact of inflation could only be partly examined. In addition, the approach followed was descriptive. It helped to present clearly how inflation evolved, but it cannot fully identify the exact role of supply and demand shocks.

Future research could build on this work in several ways. One option would be to use more advanced econometric methods, such as decomposition frameworks or VAR models, in order to measure more precisely the drivers of inflation. Another direction would be to carry out comparative studies with other Eurozone countries, to see whether the Greek case was unique or whether it reflected wider European patterns.

It would also be valuable to use micro-level data from households and firms. This would allow researchers to capture differences in how prices change, how consumption reacts and how inequalities are affected. Such an approach would give a deeper understanding of the persistence of inflation and its social consequences. It would also help evaluate whether policy measures should be temporary or permanent, providing guidance for designing more effective and fair strategies for dealing with future inflationary episodes.

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