UNIVERSITÀ DEGLI STUDI DI PADOVA

dSEA Dipartimento di Scienze Economiche e Aziendali "Marco Fanno"

EQUIS ACCREDITED

University of Padova

DEPARTMENT OF ECONOMICS AND MANAGEMENT "MARCO FANNO"

Master's Degree in Economics and Finance

Thesis Title:

Inflation Dynamics in the US and Euro Area: During and Post Covid-19 Analysis

Supervisor

Efrem Castelnuovo

Professor of Economics

Department of Economics and Management

University of Padova

Master's Candidate

Sukai Tamba

Candidate Number

2093260

Academic Year

2025 - 2026

APPENDIX

Declaration of Authenticity
(to be inserted in the thesis, after the cover page, on the first page of the Bachelor's degree or Msc degree thesis)

Dichiaro di aver preso visione del "Regolamento antiplagio" approvato dal Consiglio del Dipartimento di Scienze Economiche e Aziendali e, consapevole delle conseguenze derivanti da dichiarazioni mendaci, dichiaro che il presente lavoro non è già stato sottoposto, in tutto o in parte, per il conseguimento di un titolo accademico in altre Università italiane o straniere. Dichiaro inoltre che tutte le fonti utilizzate per la realizzazione del presente lavoro, inclusi i materiali digitali, sono state correttamente citate nel corpo del testo e nella sezione 'Riferimenti bibliografici'.

I hereby declare that I have read and understood the "Anti-plagiarism rules" approved by the Council of the Department of Economics and Management and I am aware of the consequences of making false statements. I declare that this thesis has not been previously submitted – either fully or partially – for fulfilling the requirements of an academic degree, whether in Italy or abroad. Furthermore, I declare that the references used for this work – including the digital materials – have been appropriately cited in the text and in the "References" section.

Signature .....

Contents

List of Tables

List of Figures

Acknowledgements

Writing this thesis has been a profound and rewarding journey, and I am deeply grateful to everyone who contributed to this journey and whose support, encouragement, and guidance have made this achievement possible.

To begin with, I wish to express my heartfelt gratitude to my supervisor, Professor Efrem Castlenuovo, whose expertise, insightful feedback, and unwavering patience have been invaluable throughout this process. Your intellectual guidance and encouragement challenged me to produce this work. I am especially grateful for your availability and willingness to support me throughout this important process.

To my lovely husband Baboucarr, I owe you a debt of love and appreciation. Your constant support, understanding, and patience gave me the strength to persevere during the most difficult times of this academic journey. Thank you for being my anchor when I felt overwhelmed, for motivating me when I doubted myself, and for reminding me of the bigger picture when I lost perspective. Your belief in me never wavered, and for that, I am endlessly grateful.

My deepest thanks also go to my parents, who laid the foundation for my education through their sacrifices and unwavering support. You instilled in me the value of hard work, resilience, and integrity, and those lessons have carried me through every challenge I have faced. I am equally grateful to my brothers, sisters, and extended family for their encouragement, prayers, and care throughout my studies. Each of you has contributed in ways meaningful to my success.

Finally, to all my friends, peers, and mentors who have walked with me along this path, thank you for your encouragement and companionship. Whether through study sessions, words of advice, or simple acts of kindness, you made this experience not only productive but also deeply meaningful. This thesis is the culmination of collective support, love, and dedication from all those around me. To each person who has contributed to my education, directly or indirectly, please accept my heartfelt gratitude.

Above all, my gratitude go to Almighty God who has granted me the strength, health, resilience and uniquely a bouncing baby girl during the course of the programme and the ability to endure the demands of this worthwhile journey.

Abstract

This thesis investigates the drivers of post-pandemic inflation in the United States and the Euro Area, focusing on the relative contributions of fiscal expansion, demand recovery, energy shocks, and global supply constraints between 2020 and 2024. The central research question is whether inflation during this period was primarily demand-driven, supply-driven, or the result of an interaction between both forces, and whether meaningful transatlantic differences exist in the underlying mechanisms. The study conducts a structured comparative evaluation of leading empirical and semi-structural analyses, including structural vector autoregressions, dynamic decompositions, and Phillips-curve-based frameworks. By synthesising model-based evidence from recent literature, the thesis systematically contrasts fiscal shock contributions in the United States with energy and supply-chain shock contributions in the Euro Area.

The findings indicate that post-pandemic inflation cannot be explained by a monocausal narrative. In the United States, identified fiscal shocks and rapid consumption recovery played a quantitatively significant role in driving inflation dynamics. In the Euro Area, energy price shocks contributed substantially to headline inflation in 2022, with measurable direct and indirect pass-through effects to core components. However, supply explanations alone are insufficient, as broader price indices and labour market channels also contributed to persistence. Across both economies, inflation emerged from the interaction between strong demand conditions and constrained supply capacity, reinforced by accommodative policy settings during the recovery phase. The thesis concludes that inflation management in advanced economies requires coordinated monetary, fiscal, and structural policy responses. The post-COVID episode demonstrates that fiscal–monetary interactions and sector-specific supply vulnerabilities are central to understanding modern inflation dynamics.

Keywords:**Keywords:** Post-pandemic inflation, fiscal shocks, energy price pass-through, demand–supply interaction, monetary–fiscal coordination, United States, Euro Area, COVID-19 pandemic.

1 Introduction

1.1 Background and Context

The COVID-19 pandemic created one of the most disruptive economic conditions in modern history, characterized by severe and synchronized global recessions. The phenomenon challenged governments and central bank around the world to implement extraordinary policies to respond to the quagmire the pandemic created. Such interventions included supporting households, firms, and financial systems in order the withstand the stalled economic situation. However, while these policies sought to alleviate the worst effects of the crisis, they have also plunged countries into unprecedented inflationary episode during the recovery period. The European Central Bank (ECB) reported in early 2021 a sharp and persistent increases in consumer prices peaking to staggering magnitude unseen since the 1970s in both the United States (U.S.) and the Euro Area (EA). Notably, the US year-on-year consumer price inflation exceeded 9 per cent in mid-2022, while in the EA, Harmonised Index of Consumer Prices (HICP) inflation surpassed 10 per cent in October 2022 (ECB, 2023).

On the face of it, there is seemingly a notable similarity of inflation outcomes across the Atlantic suggesting a generic global pattern. However, there are several diverging narratives underpinning inflationary dynamics in various regions. For instance, in the context of the United States, series of policy and public debates points peaking inflation to the several expansionary fiscal policies like the Coronavirus Aid, Relief, and Economic Security (CARES) Act and the American Rescue Plan (ARP), exacerbated by the magnanimity of consumer spending and tight labor markets (Mori, 2024). This mirrored a demand-driven effect. In the Euro Area on the other hand, a combination of factors such as supply-chain disruptions and the Russia-Ukraine conflict caused the monumental inflation levels. Essentially, inflation was driven by supply change dynamics, mainly due to energy price shocks and the economic implication of instability in the region (Arce, Ciccarelli, Kornprobst, and Montes-Galdón, 2023).

However, novel research have questioned this narrative. For instance, Giannone and Primiceri (2024) argued that demand shock took center stage in shaping inflation outcomes in both in the U.S. and the EA while supply shock, although a contributing factor, but speaks less to the increase in prices than it was anticipated. Other authors have similar narratives. Ascari, Bonam, Mori, and Smadu (2024) reported fiscal policy shocks as substantial contributor to rising inflation in the regions, directly contradicting the negligible effect reported by other studies. Several other researchers have joined the discussion pointing to the role of global spillover effects. Notably, Fornaro and Romei (2024) and di Giovanni, Kalemli-Özcan, Silva, and Yıldırım (2025) associated the global inflationary pressures as a consequence of the US demand stimuli and international energy price transmission across borders. In a nutshell, these findings suggests that

the inflation outcomes as a result of the Covid-19 pandemic is due to the combination of both demand and supply shocks, mediated by institutional frameworks and international linkages. We see a varying response by the two authorities, with the Federal Reserve (Fed) advancing aggressive monetary tightening and while the ECB moved more cautiously. These dynamics demonstrate the unique differences in mandates, fiscal coordination, and energy vulnerabilities (ECB, 2023). Essentially, it is imperative to understand and discuss these unique dynamics not only for researchers but also crucial for designing resilient macroeconomic policies in the face of future crises.

1.2 Problem Statement

This thesis focuses on the divergent understanding of the drivers of inflation in the United States and the European Union as a consequence of the Covid-19 pandemic. Early accounts of the situation showed a a stark transatlantic divide. Principally, US observing a demand-led factor driving inflation while supply shock narrative in the EA. However, the narrative took an interesting turn with recent studies arguing that this characterization is overly simplistic. In essence, Giannone and Primicer (2024) and Ascari et al., (2024) both argued that demand implications, including fiscal policy were also an explanatory factor in the EA, while supply shocks also played some role in the U.S.

Notwithstanding the novel evidence on the drivers of inflation in the two areas, two notable research gaps remain. Foremost, the relative weight of fiscal policy especially in the EA remains underexplored in public and policy debates. Although fiscal policy component conspicuously acknowledged lot of researchers for the case of US, the gradual and less visible fiscal loosening in Europe has been underestimated (Mori, 2024; Ascari et al., 2024). The other gap is that the literature remains fragmented across regions and disciplines, lacking a comparative synthesis of U.S. and EA inflation drivers that considers demand, supply, fiscal, and international spillovers together.

Consequently it is important to cut through this conundrum and absence of clarity as how well we design policies to respond to the inflation crisis largely depend on uncovering accurate diagnoses of inflation's causes. In essence, if inflation is primarily supply-driven, then monetary tightening risks unnecessary output losses. On the other hand if it is fiscal or demand shocks-driven, then coordinated fiscal-monetary adjustments may be explored. This thesis therefore addresses the problem by systematically reviewing the literature on post-pandemic inflation drivers across the U.S. and the EA, clarifying the role of fiscal shocks, and evaluating the mechanisms underlying inflation dynamics.

1.3 Research Questions

To address this problem, the thesis is guided by four interrelated research questions:

1. What were the main drivers of inflation in the U.S. and Euro Area during and after the COVID-19 pandemic?
2. Through which mechanisms did fiscal policy, monetary policy, supply shocks, and international spillovers contribute to inflationary dynamics?
3. How do the experiences of the U.S. and the Euro Area compare, and what similarities and differences emerge in their inflation narratives?
4. What policy lessons can be drawn for managing inflation and coordinating fiscal-monetary policy in future crises?

1.4 Objectives and Contributions

This thesis pursues the following objectives:

1. Synthesize and critically assess the existing academic and institutional literature on the drivers of post-pandemic inflation in the U.S. and EA.
2. Discuss the mechanisms through which fiscal shocks, monetary policy, supply disruptions, and global spillovers shaped inflation dynamics.
3. Compare and contrast U.S. and EA experiences, highlighting areas of convergence and divergence in inflation drivers.
4. Draw policy implications for fiscal-monetary coordination, energy resilience, and crisis management.

The thesis contributes by providing a comparative and integrative account of the inflation surge, bridging demand- versus supply-side debates and clarifying the role of fiscal policy in both regions. By critically engaging with recent studies (e.g., Giannone and Primiceri, 2024; Mori, 2024; Ascari et al., 2024; di Giovanni et al., 2025), it positions fiscal policy at the center of the discussion and highlights the importance of cross-regional analysis.

1.5 Structure of the Thesis

This thesis is organised into five substantive chapters, followed by the references.

Chapter 1, *Introduction*, sets the stage for the study by presenting the background and macroeconomic context of the post-pandemic inflation episode. It defines the problem statement,

formulates the research questions, and clarifies the objectives and expected contributions of the research. The chapter also outlines the structure of the thesis.

Chapter 2, *Literature Review*, examines the academic debate on inflation dynamics during and after the COVID-19 pandemic. It develops the conceptual framework distinguishing demand-side shocks, supply-side shocks, and fiscal–monetary policy interactions. The chapter first reviews the United States experience, then the Euro Area experience, before analysing international spillovers and drawing comparative insights from the emerging empirical literature.

Chapter 3, *Methodology*, presents the research design and analytical framework guiding the study. It explains the scope and delimitation of the analysis, the criteria for literature selection, and the methodological approach adopted for comparative synthesis. The chapter details the conceptual framework used to evaluate demand shocks, supply shocks, fiscal policy shocks, monetary policy interactions, and international spillovers. It concludes with a discussion of the comparative evaluation strategy and methodological limitations.

Chapter 4, *Empirical Evidence: Inflation Dynamics in the United States and the Euro Area*, constitutes the core analytical contribution of the thesis. It synthesises stylised facts, model-based decompositions, and sectoral evidence from the reviewed studies. The chapter documents inflation trends, fiscal expansion, energy price shocks, and demand–supply interactions in both economies. It culminates in a structured comparative evaluation of competing explanations for the post-pandemic inflation episode.

Chapter 5, *Policy Implications and Conclusion*, derives policy lessons from the empirical findings and discusses their implications for monetary policy, fiscal coordination, and structural resilience, particularly in energy markets. The chapter also outlines the contribution of the thesis, its limitations, and directions for future research, before offering concluding reflections.

The thesis concludes with the **References**, which list all sources cited throughout the study.

2 Literature Review

2.1 Conceptual Framework

Demand- versus Supply-Side Theories of Inflation

Traditionally, inflation is understood as the outcome of interactions between demand and supply shocks in the economy. Put differently from a demand side point of view, inflation is a situation where the economy's productive capacity cannot meet the bolstering aggregate demand, thereby leading to higher prices as firms adjust output and mark-ups. According to Woodford (2003), this is consistent with the Keynesian tradition and New Keynesian models whereby irrespective of whether from fiscal expansion, monetary easing, or consumer preferences, demand shock shoot prices higher prices. In empirical settings, demand shocks are typically identified by their positive co-movement between output and inflation (Uhlig, 2005).

Inflation can also be understood from a supply-side perspective, essentially as an outcome of adverse shocks that constrain production capacity or increase costs of production. These can include abrupt spikes in energy price, supply chain disruptions, or labor market frictions. According to the classic cost-push mechanism, increase in production costs are ultimately are passed on to consumers bringing about inflation even in a situation where demand is fundamentally low (Blanchard and Galí, 2007). In modern macroeconometrics, supply shocks are often identified as anomalies that shrink output while increasing prices which causes a negative co-movement between the two variables (Giannone and Primiceri, 2024).

However, COVID-19 pandemic came and basically complicated the conservation understanding of inflation drivers. The combination of sharp negative supply and demand shocks in 2020, ensued by a prompt recovery of demand alongside slower supply normalization made the narrative much complex. This therefore created conditions under which inflation could be driven by either demand surges or constrained supply, a distinction central to the post-pandemic debate (Arce, Ciccarelli, Kornprobst, and Montes-Galdón, 2023).

Role of Fiscal Policy in Inflation Dynamics

Monetary policy is long considered as one of main measures to stabilize prices. Fiscal policy conversely is recognized as one of the main drivers of inflation. A classical theoretical foundation is the Fiscal Theory of the Price Level (FTPL). The theory suggests that price level adjusts to ensure government debt sustainability given fiscal and monetary policies (Cochrane, 2023). Accordingly, the theory posits that expansionary fiscal policies leading to large deficits which are not supported by future primary surpluses will ultimately generate inflationary pressures as agents adjust expectations about the real value of debt.

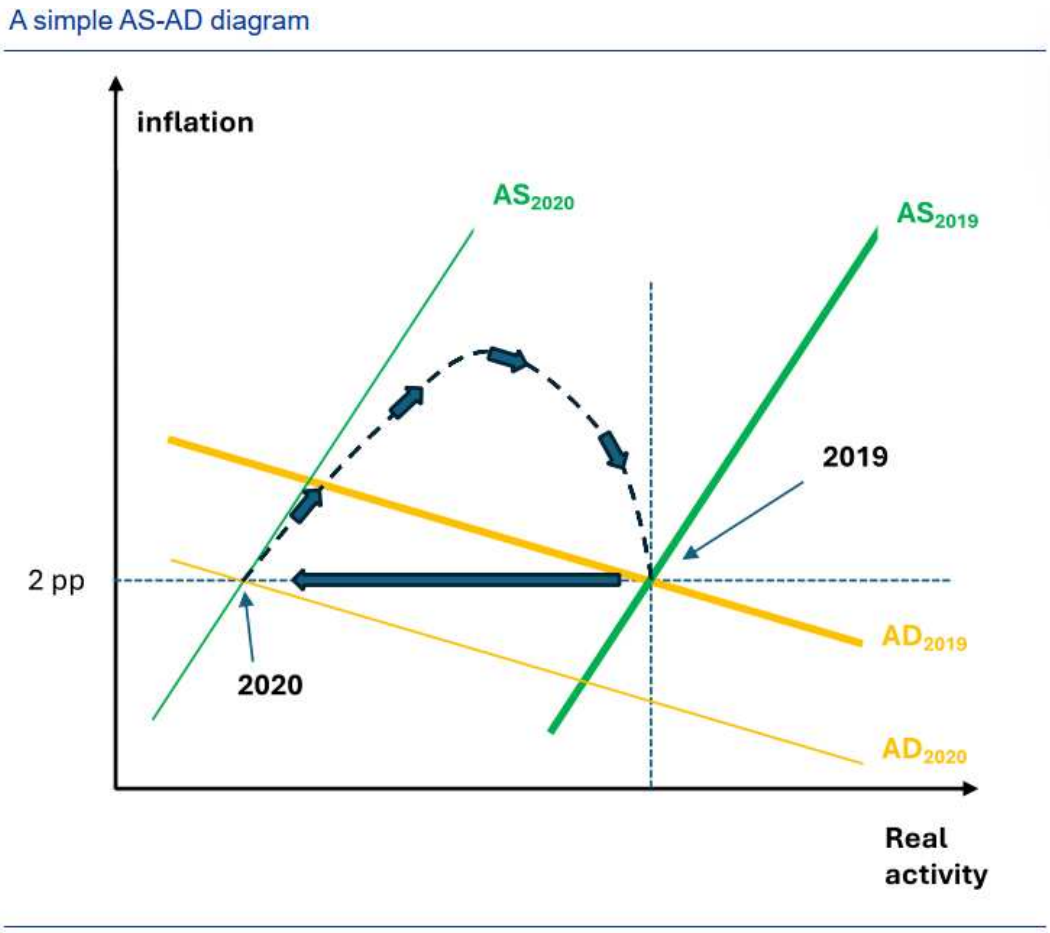


Figure 1: *A simple Demand and Supply Shocks in the AD–AS Framework. The diagram shows the economy at equilibrium in 2019, where AD-2019 and AS-2019 intersect at around 2 per cent inflation and normal output. In 2020, both aggregate demand and aggregate supply shift left due to pandemic-related shocks. Demand falls because of lockdowns and reduced spending, while supply contracts due to production and labour disruptions. The result is a sharp decline in real activity, with inflation remaining relatively stable initially due to offsetting forces.* ***Source:*** *(Giannone and Primiceri, 2024).*

Even beyond the framework of the FTPL, fiscal expansions can boost inflation through aggregate demand transmissions. For instance, transfers, tax cuts, or government spending inevitably increase disposable income and demand for goods. This increases spending capacity, increasing demand thereby raising output and prices especially when supply is inelastic. Mori (2024) stressed that the unprecedented scale of pandemic-era U.S. fiscal interventions, notably the CARES Act (2020) and ARP (2021), constituted "war-type" shocks that directly increased household incomes above pre-pandemic levels. This effectively contributed significantly to inflation. Ascari, Bonam, Mori, and Smadu (2024) also showed that fiscal policy shocks as a considerable contributor to inflation in the Euro Area, particularly when measured using the GDP deflator, contradicting the view that fiscal factors were negligible.

The importance of the fiscal-inflation relationship cannot be overemphasized, especially in monetary unions such as the EA. With a common monetary policy but decentralized fiscal

policies, inflationary pressures can differ across member countries depending on the size, timing, and structure of fiscal interventions. This creates challenges for coordination and complicates the ECB's price stability mandate.

Monetary Policy Frameworks: Federal Reserve versus European Central Bank

One fundamental phenomenon that shape inflation dynamics in the US and EA is the unique difference in institutional administration of monetary policy, given the differences in operations and mandate. In the case of the US, The Federal Reserve anchors the role of a dual mandate of attaining optimum employment and price stability. This dual mandate accordingly has historically given latitude to the Fed to endure above-target inflationary periods in times where output is shrinking thus poor employment outcomes. Furthermore, the mandate also allows them to robustly tighten policy when inflation is high even at the expense of slower growth (Bernanke, 2022). The Fed during the pandemic employed series of loose measures notably significantly reducing interest rates to near zero values as well as large-scale asset purchases. But when inflation rose staggeringly, the policy took a turn in 2022 when the Fed began aggressively implementing tightening (Giannone and Primiceri, 2024).

By contrast, the European Central Bank has one overriding mandate which is essentially to stabilize prices. This the bank defined as a symmetric 2 per cent inflation target. Given the differences in the member state economies and lack of unified authority, the ECB is struggled with smooth coordination of measures. Even though with extraordinary measures such as the Pandemic Emergency Purchase Programme (PEPP) as a strategic response to the pandemic, much remained to be desired because of the institutional and varying economic complexities (ECB, 2023). According to Giannone and Primiceri (2024), ECB is observed to demonstrate a unique pattern in as an institution administering inflation targeting; that essentially, inflating targeting has historically been anchored on expectations. This create a situation of a relatively flat aggregate demand curve, implying that supply shocks often stall output much more adversely compared to inflation hikes, with a unique exception when demand is simultaneously boosted (Giannone and Primiceri, 2024). These economic diversities and institutional differences in a nutshell demonstrate the response and policy divergence towards Covid-19 inflation outcomes. As a result, it was easier for the Fed to take action for they advanced prompt rise in interest rates. Meanwhile, the ECB had to act in a more painstaking way trying to create an intersection between price stability with the risk of fragmentation in sovereign bond markets. These unique and pronounced differences highlight how monetary frameworks condition the transmission of both demand and supply shocks into inflation outcomes.

2.2 U.S. Experience

The United States represents one of the clearest examples of demand-driven inflation during the COVID-19 recovery. A combination of extraordinary fiscal stimulus, rapid demand rebound, tight labor markets, and initially accommodative monetary policy created the conditions for the sharpest inflationary surge since the early 1980s.

Fiscal Shocks: CARES Act and American Rescue Plan

In response to the pandemic, the US government made historically significant fiscal initiatives. More than USD 2.2 trillion was infused through the Coronavirus Aid, Relief, and Economic Security (CARES) Act of March 2020, which offered corporate assistance, unemployment benefits, and direct transfers. Subsequently, the USD 1.8 trillion American Rescue Plan (ARP) of March 2021 provided additional fiscal support and prolonged income transfers. Mori (2024) suggests that these packages amounted to ”war-type” fiscal shocks, which greatly increased aggregate demand and raised disposable incomes above pre-pandemic levels. According to his structural VAR study, fiscal shocks contributed almost four percentage points to inflation in 2021–2022, accounting for over half of the U.S. inflation rise. This finding is consistent with earlier concerns raised by Blanchard (2021) and Summers (2021) that the magnitude of the ARP risked overheating the economy.

Demand Recovery, Labour Markets, and Wage Pressures

An already robust rebound in pent-up demand was accelerated by fiscal shocks. After restrictions were removed, American households quickly began spending more on home renovations, durable goods, and later services, which increased pricing pressures (Fornaro and Romei, 2024). With unemployment falling from around 15 per cent in April 2020 to less than 4 per cent in early 2022, the U.S. job market tightened rapidly. Increased job openings and a labor shortage offered workers more negotiating leverage, which sped up pay growth. Nominal salary rises strengthened the enduring pricing pressures by increasing firms' cost structures, even while real salaries sometimes trailed inflation (Bernanke and Blanchard, 2024). The combination of high demand and limited supply capacity increased inflationary pressures more than fiscal policy could account for.

Role of Monetary Policy Stance

The monetary policy of the Federal Reserve further influenced how demand and fiscal shocks spread. The Fed increased its balance sheet through massive asset purchases at the start of the pandemic and lowered interest rates to almost zero. Due to the Fed's updated strategy, which placed an emphasis on ”average inflation targeting” and a commitment to promoting maximum employment, this accommodative approach continued throughout the majority of 2021, even while inflation increased over goal (Bernanke, 2022).

Giannone and Primiceri (2024) argue that the aggregate demand curve is flat as a result of this accommodating monetary policy, which means that demand shocks result in higher inflation rather than higher output. The Fed didn't start an aggressive tightening cycle until March 2022, when it raised the federal funds rate by more than 500 basis points in just 18 months. However, inflationary momentum had already taken hold by that point.

All things considered, significant fiscal expansions combined with a robust demand rebound and initially lax monetary policy were the main causes of the U.S. inflation spike. The inflationary process was further strengthened by wage pressures and the strength of the labor market. The U.S. story emphasizes how demand-side forces dominated the inflation path during the post-pandemic recovery when compared to the Euro Area.

2.3 Euro Area Experience

Although the Euro Area likewise had an unheard-of spike in inflation after the COVID-19 epidemic, the factors influencing price dynamics were not as prominent as they were in the US. The Euro Area's inflation path was characterized by a combination of severe supply shocks, particularly energy price spikes and supply chain disruptions, and a delayed but considerable fiscal easing, rather than an immediate demand boom. The ECB's institutional framework, which is more limited than the Fed's because of the member states' heterogeneity and lack of a single fiscal authority, served as a filter for these processes.

Energy Shocks and Supply Chain Disruptions

The Euro Area's inflation story revolved around energy shocks. Due to its reliance on imported oil and natural gas, the area was especially susceptible to changes in the price of energy globally. After Russia invaded Ukraine in February 2022, the situation worsened and gas and power costs skyrocketed. According to Neri et al. (2023), energy shocks were responsible for between 20 per cent and 50 per cent of core inflation and around 60 per cent of headline inflation at its peak in late 2022. Disruptions to the supply chain increased these demands even further. Prices increased across industries due to global shipping prices, semiconductor shortages, and intermediate products bottlenecks; the Global Supply Chain Pressure Index (GSCPI) remained high far into 2022 (Arce, Ciccarelli, Kornprobst, and Montes-Galdón, 2023). Unlike the US where demand shocks were dominant, these supply shocks were more visible and politically salient in the Euro Area, reinforcing the narrative of "imported inflation".

Fiscal Response: NGEU and Delayed Support

Research demonstrates that the Euro Area's fiscal policy reaction was anything but insignificant, despite perceptions of limited fiscal effect. Adopted in 2020 with a budget of around €750 billion (almost 6 per cent of EU GDP), the Next Generation EU (NGEU) recovery program

marked a first for fiscal integration. However, compared to the U.S. stimulus packages, the immediate impact was less significant since the payouts were spread out over a number of years (2021–2026) (Ascari, Bonam, Mori, and Smadu, 2024). In addition, national budgetary policies prioritized targeted subsidies and employment retention programs like Germany's Kurzarbeit above direct household payments.

According to Ascari et al. (2024), at the end of 2022, fiscal shocks accounted for around 18 per cent of the inflation peak, or 1.5 percentage points, of HICP inflation. When the GDP deflator was used, the effect was much more pronounced, with fiscal shocks accounting for 27 per cent of the rise. Crucially, the role of fiscal policy in the EA was slow and delayed: whereas the U.S. saw rapid inflationary pressure from 2020 to 2021, the Euro Area's fiscal relaxation accelerated throughout the 2021–2022 period of increasing inflation. EA inflation peaked around six months after the U.S., which can be explained by this sequencing (Giannone and Primiceri, 2024).

ECB Policy and Monetary–Fiscal Interactions

These dynamics were addressed by the European Central Bank (ECB) in a more limited institutional framework. The ECB has a single price stability objective, aiming for symmetrical inflation of 2 per cent, in contrast to the Fed's dual mandate. Through the epidemic Emergency Purchase Programme (PEPP), the ECB increased the size of its balance sheet throughout the epidemic while keeping interest rates extremely low. The ECB was confronted with a conundrum as inflation surged in 2021–2022, given that tightening policy may jeopardize fragile recoveries and exacerbate sovereign debt spreads across member states. As a result, the ECB started raising rates only in July 2022 and tightened more gradually and later than the Fed.

One may argue that this relative delay made inflation more persistent. Furthermore, coordination was made more difficult by the lack of centralized budgetary authorities. Some member nations adopted more conservative policies, while others implemented more sweeping budgetary measures. Cross-country variance is highlighted by Ascari et al. (2024): in France, fiscal contributions to inflation were dampened by restricted fiscal space, but in Italy, fiscal shocks had a greater impact on GDP than on inflation. The institutional difficulty of controlling inflation within a monetary union is highlighted by this variability.

In a nutshell, a combination of large but delayed fiscal shocks and severe supply shocks, mediated by ECB policy limitations, shaped inflation in the Euro Area. Dependency on energy prices and disjointed fiscal responses increased inflationary pressures, but demand also became more significant than first thought as a result of progressive fiscal easing. Therefore, recent data refutes the idea that supply alone was responsible for Euro inflation, demonstrating that both supply and demand forces were at play, albeit with different timing and intensity than in the U.S.

2.4 International Dimensions

The post-pandemic spike in inflation was not limited to a single country. Fiscal expansions, supply disruptions, and energy price shocks in one region swiftly spread to other regions through trade, energy, and financial channels due to the high level of global economic interdependence.

Spillovers from U.S. Fiscal Policy

There were worldwide inflationary repercussions from the extraordinary U.S. budgetary growth. By increasing imports, raising global commodity demand, and altering international interest rate expectations, Fornaro and Romei (2024) argue that the CARES and ARP Acts not only enhanced demand in the United States but also had an impact on other economies. Similarly, di Giovanni, Kalemli-Özcan, Silva, and Yıldırım (2025) demonstrate that the U.S. fiscal stimulus increased worldwide energy prices and placed pressure on supply chains, which led to an increase in inflation overseas. They do this by employing a multi-country, multi-sector New Keynesian model with global input-output linkages. Their model emphasizes the significance of cross-country transmission mechanisms by showing that demand-driven shocks in the US may account for a sizable portion of inflation in the Euro Area and other advanced countries.

Trade, Energy, and Financial Market Channels

These spillovers were magnified through three key channels:

1. Trade linkages: Between 2020 and 2021, the United States' increased demand for goods, particularly durable goods, spilled over through imports, increasing the cost of international transportation and putting strain on supply chains (Fornaro and Romei, 2024). These trade consequences were especially significant for Euro Area economies that were focused on exports.

2. Energy markets: Internationally interconnected markets set the pricing of coal, natural gas, and oil globally. Due to its significant reliance on imported energy, the Euro Area's inflation was immediately impacted by the spike in commodity prices caused by U.S. demand shocks (Neri et al., 2023). Although the underlying pricing pressures had been increasing, these dynamics were made worse by the ensuing geopolitical shock caused by Russia's invasion of Ukraine in 2022.

3. Financial channels: International capital flows and global liquidity were impacted by the expansionary fiscal and monetary policies of the United States. A strong U.S. currency increased imported inflation for other economies, influencing exchange rates (di Giovanni et al., 2025). Financial markets also influenced central bank reactions globally by transmitting expectations about future inflation and interest rates across national boundaries.

Overall, global factors show that inflation was caused by internationally interconnected shocks rather than being solely a domestic issue, with the Euro Area and beyond being disproportionately impacted by U.S. budgetary policies.

2.5 Comparative Insights

The literature offers valuable comparative lessons on the drivers of inflation across the U.S. and Euro Area, highlighting both convergence and divergence.

Demand Dominance versus Supply Narratives

Contrary to early narratives that dramatically separated the two scenarios, a key finding from newer studies is that demand shocks had a dominant role in both the U.S. and the Euro Area. According to Giannone and Primiceri (2024), supply shocks while significant particularly in energy markets, were comparatively secondary to demand variables, which were responsible for much of the inflation spike on both sides of the Atlantic. Similarly, Ascari et al. (2024) show that fiscal shocks also significantly contributed to Euro Area inflation, especially when evaluated by the GDP deflator, while Mori (2024) highlights that fiscal shocks were the single most important driver of U.S. inflation. The notion that Euro inflation was ”imported” and only caused by supply is called into question by this data, suggesting that both regions experienced domestically generated inflation from demand policies interacting with constrained supply.

Convergence and Divergence between the U.S. and Euro Area

Despite this convergence, significant distinctions still exist:

- Timing and scope of fiscal policy: The United States' massive, front-loaded budgetary measures immediately caused inflationary pressures. The fiscal growth of the Euro Area, on the other hand, was more gradual, smaller, and delayed, resulting in a lagged inflationary impact (Mori, 2024; Ascari et al., 2024).

- Energy dependence: Because of its reliance on Russian imports, the Euro Area was disproportionately impacted by global energy shocks, especially those involving natural gas (Neri et al., 2023). Although energy had an impact, U.S. inflation was less vulnerable to these threats.

- Monetary policy responses: Due to institutional disparities in mandates and fiscal-monetary coordination, the Fed tightened policy aggressively in early 2022 while the ECB acted more cautiously and later (Bernanke, 2022; ECB, 2023).

- Cross-country heterogeneity: Each member state in the Euro Area had different inflation and fiscal patterns. While France's huge pre-existing deficits limited further stimulus, Italy's fiscal intervention had greater GDP effects (Ascari et al., 2024). In the context of the United States, where budgetary policy is centralized, this variant has no obvious counterpart.

When combined, these observations imply that whereas demand-driven inflation was a common experience in both the U.S. and the Euro Area during and after COVID-19, the proportional contributions of institutional, supply, and fiscal factors differed. The Euro Area emphasizes the inflationary susceptibility brought about by energy reliance and fragmented fiscal capacity, while the U.S. experience emphasizes the inflationary dangers of large-scale, front-loaded fiscal increases.

Table 1: Comparative assessment of post-pandemic inflation drivers in the United States and the Euro Area (2020–2024).

Driver Category	United States	Euro Area	Key Evidence
Fiscal Policy Shocks	Large, front-loaded discretionary stimulus (CARES Act, American Rescue Plan). Structural VAR evidence indicates unusually strong fiscal contributions to inflation during 2021–2022, with fiscal shocks historically dominant in this episode.	More gradual and fragmented fiscal response (NextGenerationEU and national packages). Model-based decompositions suggest fiscal demand contributed positively to inflation, but to a smaller extent relative to energy shocks.	Mori (2024); Ascari et al. (2024)
Aggregate Demand Recovery	Rapid recovery of consumption relative to pre-pandemic projections; strong rebound in durable goods demand. Demand overshooting relative to supply capacity during reopening phase.	Slower recovery of household consumption; demand recovery more gradual and heterogeneous across member states.	Giannone & Primiceri (2024); Fornaro & Romei (2024)
Labour Market Tightness	Tight labour market conditions during 2021–2022; elevated vacancy-to-unemployment ratios and wage growth contributing to services inflation persistence.	Labour market recovery slower initially; wage pressures present but more moderate relative to the United States.	Arce et al. (2024); Giannone & Primiceri (2024)
Energy Price Shocks	Energy price increases contributed to headline inflation, but the economy is less dependent on imported energy; smaller direct inflation share compared to EA.	Energy inflation contributed substantially to headline inflation, accounting for roughly sixty per cent of headline inflation at the 2022 peak when direct and indirect effects are considered.	Neri et al. (2023)
Supply Chain and Shortages	Pandemic-related bottlenecks affected tradables; shortages contributed to goods inflation but with limited persistence once global logistics normalised.	Severe supply bottlenecks and higher exposure to global input cost pressures; measurable inflation responses to shortages shocks in model-based impulse responses.	Arce et al. (2024)
International Spillovers	United States fiscal expansion and demand recovery contributed to global tradables demand; spillover channels through trade and production networks.	More exposed to global energy and input price spillovers; international transmission amplified domestic inflation dynamics.	di Giovanni et al. (2025)
Monetary Policy Stance and Timing	Federal Reserve initiated aggressive tightening in March 2022; rapid policy rate increases to contain demand-driven inflation pressures.	European Central Bank began tightening in July 2022; response constrained by fragmentation risks and weaker initial recovery.	Giannone & Primiceri (2024); ECB (2023)

3 Methodology

3.1 Research Design and Overall Approach

This thesis adopts a qualitative and comparative research design based on a structured review and synthesis of the academic and institutional literature on inflation dynamics during and after the COVID-19 pandemic. The study does not involve the estimation of new econometric models or the construction of original datasets. Instead, it focuses on interpreting, comparing, and integrating existing empirical findings in order to clarify the drivers of inflation in the United States and the Euro Area.

This methodological choice reflects the nature of the research question. Post pandemic inflation has already been analysed extensively using advanced quantitative tools such as Structural Vector Autoregressions, Bayesian VARs, and semi structural macroeconomic models. However, despite the richness of this empirical literature, policy debates and public discussions remain fragmented, often relying on simplified narratives that emphasise either demand or supply factors in isolation. The main contribution of this thesis therefore lies in providing a coherent comparative interpretation of this evidence rather than replicating individual models (Giannone and Primiceri, 2024).

The methodology is consistent with recent macroeconomic research that emphasises synthesis and comparative interpretation as valid scholarly contributions, particularly in periods characterised by large and unprecedented shocks such as the COVID-19 crisis (Arce et al., 2023; Giannone and Primiceri, 2024).

3.2 Scope and Focus of the Study

The analysis covers the period from **2020 to 2024**, encompassing the outbreak of the COVID-19 pandemic, the subsequent economic recovery, and the peak of inflation in both the United States and the Euro Area. This time frame allows the study to capture the interaction between crisis driven policy interventions and inflationary outcomes during the recovery phase.

Geographically, the thesis focuses on the **United States and the Euro Area**. These two economies are selected for three main reasons. First, they experienced some of the most pronounced inflationary surges among advanced economies in the post pandemic period. Second, they implemented large scale but institutionally distinct fiscal and monetary policy responses. Third, they play a central role in global trade, energy markets, and financial systems, making their inflation dynamics highly relevant for international spillovers (di Giovanni et al., 2025).

The study does not extend to emerging or developing economies. While inflation dynamics in

those regions are important, differences in monetary credibility, fiscal capacity, and exchange rate regimes would require a separate analytical framework.

3.3 Literature Selection and Sources

The thesis relies exclusively on secondary sources, including peer reviewed journal articles, academic working papers, and publications from central banks and policy institutions. The literature reviewed spans the period from 2020 to 2024 and includes both academic and policy oriented research.

The selection of studies is guided by three criteria.

- First, relevance to post pandemic inflation dynamics in the United States, the Euro Area, or both.
- Second, clarity in identifying and interpreting demand shocks, supply shocks, fiscal policy shocks, and monetary policy effects.
- Third, policy relevance, particularly in relation to fiscal monetary interactions and institutional constraints.

Key institutional sources include the European Central Bank Economic Bulletin and Occasional Papers, which provide detailed analysis of inflation drivers and policy responses in the Euro Area (ECB, 2023). Academic sources include Giannone and Primiceri (2024) on the drivers of post pandemic inflation, Mori (2024) on fiscal shocks in the United States, Ascari et al. (2024) on fiscal policy and inflation in the Euro Area, and di Giovanni et al. (2025) on global spillovers. Energy related inflation dynamics are examined using evidence from Neri et al. (2023).

The theoretical foundations of the analysis draw on established macroeconomic contributions, including Woodford (2003), Blanchard and Galí (2007), and Uhlig (2005).

3.4 Analytical and Conceptual Framework

The analysis is organised around a four component analytical framework that reflects both macroeconomic theory and the empirical strategies used in the literature. These components are aggregate demand shocks, aggregate supply shocks, fiscal policy shocks, and international spillovers.

This framework allows for a systematic comparison of inflation drivers across regions and across studies, while avoiding reliance on a single explanatory narrative.

3.4.1 Demand and Supply Shocks

In macroeconomic theory, inflation emerges from interactions between aggregate demand and aggregate supply. Demand driven inflation occurs when aggregate demand expands faster than productive capacity, leading firms to raise prices. In New Keynesian models, such demand shocks are typically associated with positive co movements between output and inflation (Woodford, 2003; Uhlig, 2005).

Supply driven inflation arises from increases in production costs or constraints on supply, such as energy price shocks or supply chain disruptions. These shocks generally lead to higher inflation alongside weaker output, producing a negative co movement between prices and real activity (Blanchard and Galí, 2007).

The COVID-19 pandemic complicates this distinction. The initial phase of the crisis involved simultaneous negative demand and supply shocks, followed by a rapid recovery in demand while supply remained constrained. As highlighted by Arce et al. (2023), this sequencing created conditions in which inflation could be driven by both demand and supply forces at different stages of the recovery.

Rather than imposing a single interpretation, this thesis evaluates how different studies identify and weight demand and supply shocks, and how these assessments differ between the United States and the Euro Area (Giannone and Primiceri, 2024).

3.4.2 Fiscal Policy Shocks

Fiscal policy is central to the analysis. Fiscal shocks are defined as unexpected changes in government spending, transfers, or taxation that affect aggregate demand and inflation. The theoretical foundation for analysing fiscal driven inflation is provided by the Fiscal Theory of the Price Level, which emphasises the role of fiscal sustainability and expectations in determining the price level (Cochrane, 2023).

Beyond this theoretical framework, fiscal expansions can influence inflation through more direct demand channels. Large scale transfers and government spending increase household disposable income and consumption, particularly when supply is constrained. Mori (2024) shows that the unprecedented scale of U.S. fiscal interventions during the pandemic significantly boosted demand and contributed substantially to inflation. Ascari et al. (2024) provide similar evidence for the Euro Area, showing that fiscal shocks played a meaningful role in inflation dynamics, especially when measured using the GDP deflator.

The thesis compares how fiscal policy operated differently across the two regions, focusing on differences in timing, magnitude, and composition of fiscal interventions.

3.4.3 Monetary Policy Frameworks and Policy Interaction

Monetary policy shapes how demand and fiscal shocks transmit into inflation. The analysis accounts for institutional differences between the Federal Reserve and the European Central Bank. The Federal Reserve operates under a dual mandate of price stability and maximum employment, which allowed it to maintain an accommodative stance for longer during the recovery (Bernanke, 2022). In contrast, the ECB operates under a primary mandate of price stability and faces additional constraints arising from fiscal heterogeneity across member states (ECB, 2023).

Giannone and Primiceri (2024) argue that accommodative monetary policy flattened the aggregate demand curve, causing demand shocks to translate more strongly into inflation rather than output. The thesis examines how delayed monetary tightening in both regions amplified inflationary pressures during the recovery phase.

3.4.4 International Spillovers

The analysis explicitly incorporates international spillovers. In a highly integrated global economy, fiscal and demand shocks in one major economy can affect inflation elsewhere through trade, energy markets, and financial channels. Di Giovanni et al. (2025) show that U.S. fiscal expansions during the pandemic contributed to inflation in other advanced economies through global input output linkages. Fornaro and Romei (2024) similarly highlight the role of global demand and energy markets in transmitting inflationary pressures across borders.

These spillovers are particularly relevant for the Euro Area, given its reliance on imported energy and exposure to global commodity markets (Neri et al., 2023).

3.5 Comparative Strategy

A structured comparative approach is used to contrast the United States and the Euro Area along four dimensions. These include the timing and magnitude of inflation peaks, the design and sequencing of fiscal interventions, institutional differences in monetary policy frameworks, and exposure to energy and external shocks.

This comparison allows the thesis to assess whether observed differences in inflation outcomes reflect fundamentally different economic mechanisms or variations in policy responses to shared global shocks (Bernanke and Blanchard, 2024; Giannone and Primiceri, 2024).

3.6 Interpretation and Synthesis

Findings from the literature are synthesised using a thematic comparative approach. Particular attention is paid to differences arising from alternative inflation measures, identification strategies, and time horizons. Where studies reach different conclusions, the thesis discusses the sources of disagreement rather than privileging a single narrative (Ascari et al., 2024).

This approach enables a balanced evaluation of demand led and supply led explanations of post pandemic inflation in both regions.

3.7 Methodological Limitations

This literature-based methodology has several limitations. The analysis depends on the assumptions and identification strategies used in existing studies. The absence of original econometric estimation limits the ability to conduct independent robustness checks. Finally, the focus on advanced economies excludes inflation dynamics in emerging markets, where institutional conditions differ substantially.

Despite these limitations, the methodology is appropriate for the objective of providing a comparative and integrative assessment of post COVID inflation dynamics.

4 Empirical Evidence: Inflation Dynamics in the United States and the Euro Area

This chapter assembles empirical evidence from the reviewed papers to document inflation dynamics in the United States and the Euro Area during the COVID-19 period and its aftermath. The chapter does not introduce new econometric estimates; rather, it constructs a verifiable evidence base using time series, decompositions, and impulse responses reported in the core studies. The purpose is to move beyond narrative description and to evaluate the competing explanations of post-pandemic inflation by focusing on what the evidence implies about timing, composition, and shock transmission across economies and models.

4.1 Stylised Facts: Inflation, Output, and Policy Rates

A first set of stylised facts concerns the joint evolution of real activity, inflation, and energy prices across the United States and the Euro Area. Giannone and Primiceri (2024) explicitly motivate their analysis by documenting how real GDP and consumption evolved relative to pre-pandemic projections and how inflation co-moved across economies and price indices. Their evidence establishes two central empirical regularities: first, the post-pandemic recovery in real activity was faster in the United States than in the Euro Area; second, inflation rose in both economies across multiple measures, and energy price inflation moved sharply in both, with a visibly strong cycle around 2021–2022.

4.1.1 Real GDP and consumption expenditure in the US and the EA

Figure 2 (Giannone and Primiceri, 2024) plots real GDP and consumption expenditure in the United States and the Euro Area relative to pre-COVID projections and shows that the United States recovery is "considerably faster," while GDP and especially consumption in the Euro Area remain below those pre-pandemic projections for longer (Giannone & Primiceri, 2024). The empirics is important for interpretation, that is, faster recovery in consumption is not simply an outcome variable but an indicator of the strength of aggregate demand conditions during reopening. Because consumption enters directly into aggregate demand, the observed divergence provides a factual basis for why demand-based accounts may have greater salience for the United States than for the Euro Area within the same global episode.

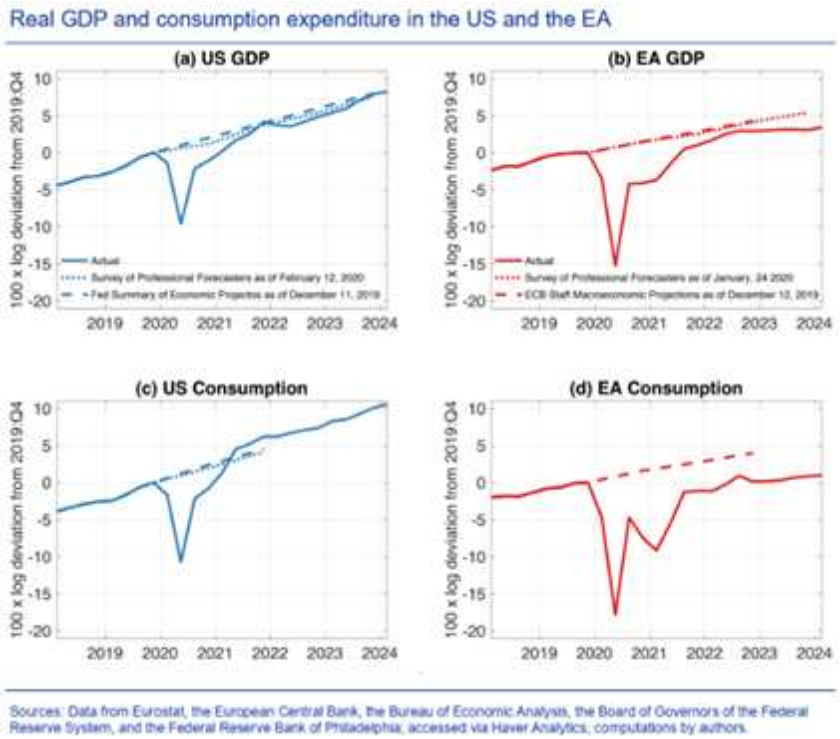


Figure 2: *Real GDP and consumption expenditure in the US and the EA*

4.1.2 Inflation in the US and the EA, based on several price indexes

Figure 3 (Giannone and Primiceri, 2024) plots year-on-year inflation in the United States and the Euro Area using several price indices. The key implication of the figure is that inflation rose substantially in both economies during 2021–2022, and that this rise is not an artefact of a single index choice. Analytically, this matters because competing explanations sometimes rely on the idea that inflation was "headline-only" or "energy-only." A cross-index increase strengthens the inference that the inflation episode involved broader price dynamics, even if the composition differed across regions. It also motivates the need for decompositions (Sections 4.3-4.4) rather than reliance on a single headline measure.

4.1.3 Energy-price inflation in the US and the EA, and CPI/HICP inflation excluding energy

Figure 4 (Giannone and Primiceri, 2024) presents energy-price inflation in the United States and the Euro Area and compares it with inflation excluding energy. The figure shows energy-price inflation rising and falling sharply, with a pronounced surge around 2021–2022, while inflation excluding energy follows a different, smoother pattern. This is not merely descriptive: it creates an identification discipline for interpretation. If energy were the sole driver, inflation excluding energy would remain comparatively muted. The fact that the paper reports both series side-by-side invites a more careful conclusion: energy price inflation is clearly an important

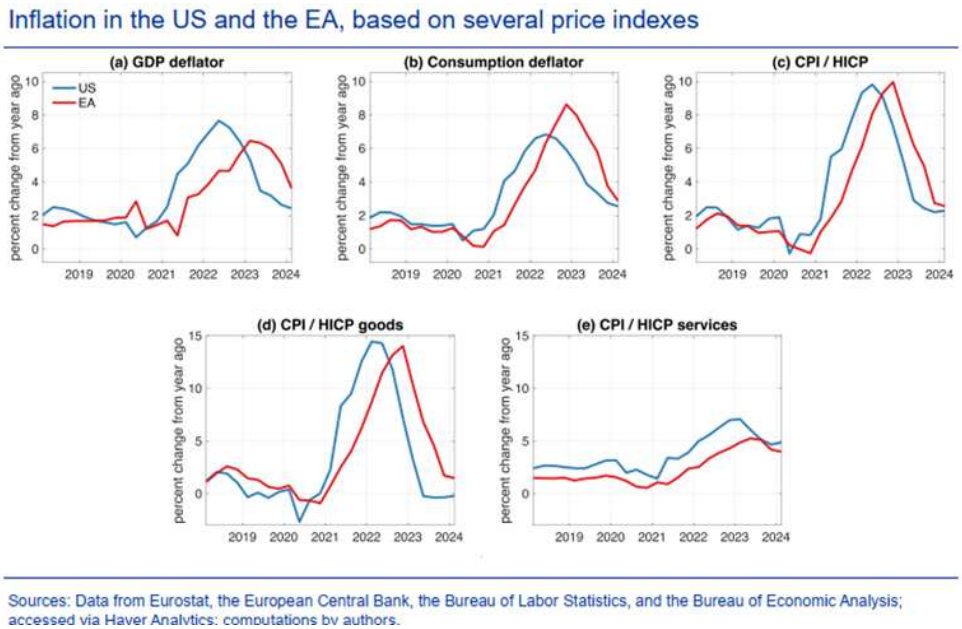


Figure 3: *Inflation in the US and the EA, based on several price indexes*

component of the inflation episode, but the behaviour of inflation excluding energy indicates that the inflation shock cannot be reduced to energy alone. This motivates the sectoral and model-based decompositions used later in the chapter.

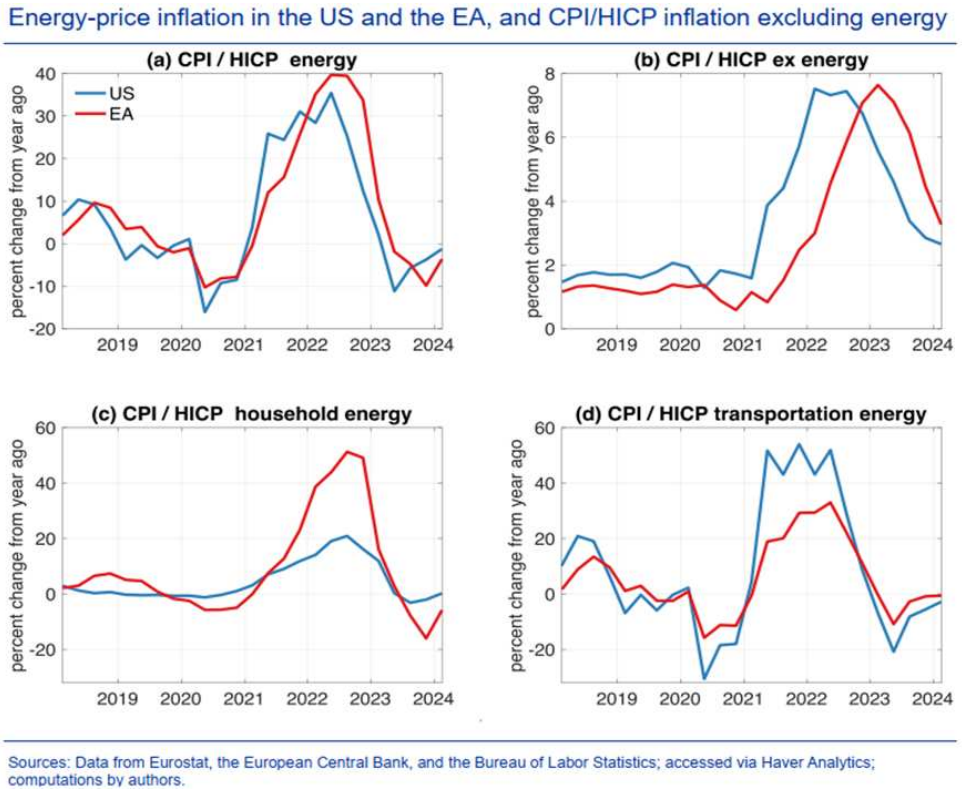


Figure 4: *Energy-price inflation in the US and the EA, and CPI/HICP inflation excluding energy*

4.2 Fiscal Expansion and Debt Dynamics

A second set of stylised facts concerns fiscal policy and its connection to inflation through estimated fiscal shocks and fiscal indicators. The critical analytical point is that the reviewed literature does not treat fiscal policy as a vague background factor; it operationalises fiscal impulses through explicit identification strategies (for example, using sign restrictions in a structural vector autoregression) and links them to inflation contributions through historical decompositions and impulse responses. This matters because a comparison must distinguish between "fiscal stance moved" and "identified fiscal shocks contributed to inflation" as two different empirical claims.

4.2.1 Decomposition of Euro Area inflation, GDP and primary deficit-to-GDP ratio

Figure 5 (Ascari et al., 2024) provides a cumulative decomposition of Euro Area inflation (reported for both Harmonised Index of Consumer Prices inflation and GDP deflator inflation), GDP, and the primary deficit-to-GDP ratio after 2019:IV, filtering out initial conditions and pre-COVID shocks (Ascari et al., 2024). The decomposition explicitly attributes movements in inflation and fiscal indicators to identified shocks. Substantively, it directly addresses the claim that fiscal forces were irrelevant in the Euro Area: the figure reports a non-trivial role for demand-type forces and fiscal shocks in the inflation dynamics depending on the inflation measure used. The analytical implication is that Euro Area inflation cannot be interpreted solely through an "imported inflation" lens without engaging with the paper's decomposition evidence, because the authors' identified shocks generate measurable contributions not only to inflation but also to fiscal and output variables.

4.2.2 Fiscal policy indicators in the Euro Area

Figure 6 (Ascari et al., 2024) plots fiscal policy indicators in the Euro Area, including cyclically adjusted primary deficit, total expenditure excluding interest, and total revenue, expressed as a percentage of GDP and adjusted for cyclical components using trend GDP; it also displays projected values with dotted lines (Ascari et al., 2024). This figure is crucial for a factual narrative of fiscal dynamics: it shows that fiscal stance changes are visible in standard indicators and that the fiscal consolidation path is gradual rather than immediate. Analytically, this matters because it clarifies the time profile through which fiscal policy may interact with inflation. If fiscal stance remains expansionary or contracts only slowly, demand conditions can remain supportive while supply constraints persist, producing inflation persistence. The figure therefore provides an empirically grounded basis for timing arguments when comparing the Euro Area with the United States literature that emphasises large early fiscal impulses.

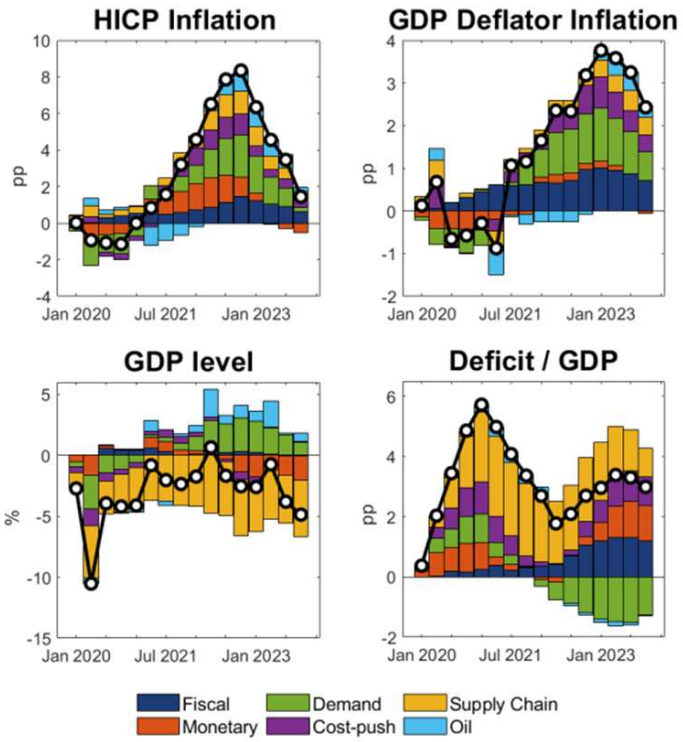
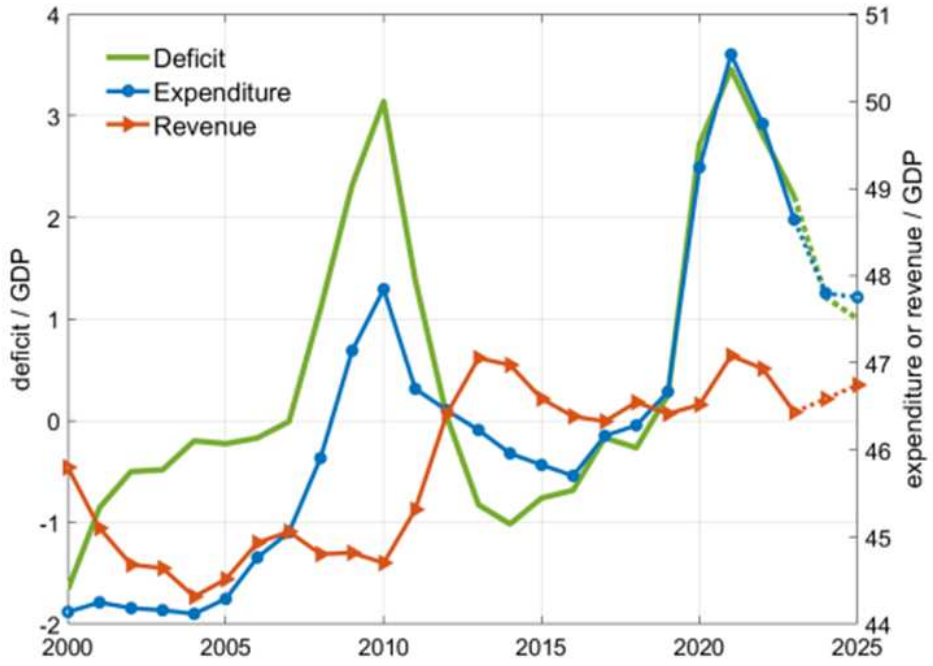


Figure 5: *Decomposition of Euro Area inflation, GDP and primary deficit-to-GDP ratio*

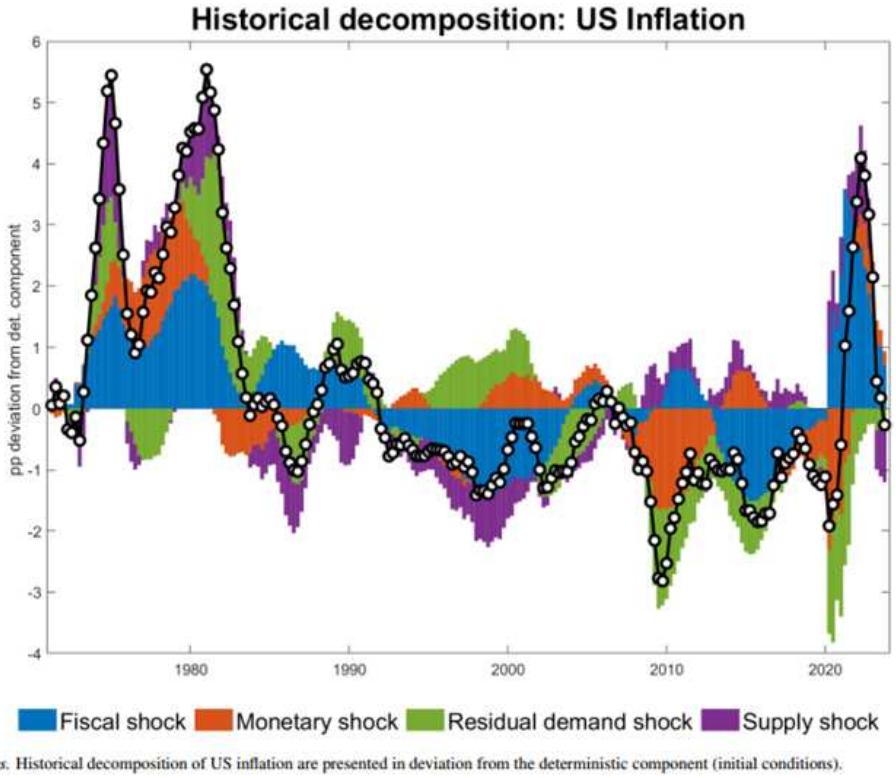


Sources: AMECO database, series: UBLGB, UUTGB, URTGA. Cyclically adjusted primary deficit (- CAPB), total expenditure excluding interest (G), and total revenue (T), as a percentage of GDP and adjusted for the cyclical component – using trend GDP. Dotted lines: projected values.

Figure 6: *Fiscal policy indicators in the Euro Area*

4.2.3 Historical decomposition of US inflation (deviation from deterministic component)

Figure 7 (Mori, 2024) presents a historical decomposition of United States inflation, expressed as deviations from the deterministic component (initial conditions). The paper explicitly states that fiscal inflation and fiscal disinflation have been features of the United States economy historically, but that fiscal contributions had "never been as dominant" as during the post-COVID inflation episode (Mori, 2024). It is important to interpret this carefully, that is, it is not a claim that fiscal policy is always the dominant driver of inflation, but rather under Mori's identified fiscal shocks, the post-COVID period shows an unusually large fiscal contribution relative to earlier episodes. The analytical implication is that the United States experience provides a concrete empirical example in which fiscal shock identification yields large measured inflation contributions, thereby anchoring the plausibility of fiscal-demand narratives for 2021–2022.



Notes. Historical decomposition of US inflation are presented in deviation from the deterministic component (initial conditions).

Figure 7: *Historical decomposition of US inflation (deviation from deterministic component*)

4.3 Sectoral Decomposition: Goods versus Services

Sectoral evidence is essential because it provides a compositional test for competing narratives. If inflation were primarily energy-driven, one would expect a strong concentration in energy components and weaker diffusion. If inflation were primarily driven by broad domestic demand overheating, one would expect a more uniform rise across services and wage-sensitive categories.

The reviewed evidence suggests a more nuanced and verifiable sequence: energy prices rose sharply, energy inflation contributed materially to headline inflation, and there were measurable indirect effects and pass-through into broader components, with implications for core inflation.

4.3.1 Developments in energy prices

Figure 8 (Neri et al., 2023) documents energy commodity price developments and explicitly notes that while oil price increases were sizeable, the magnitude of gas and electricity price increases was "unprecedented," with spot prices rising by almost three hundred per cent in less than twelve months (Neri et al., 2023). This figure is a factual anchor for why supply-side explanations receive particular emphasis in the Euro Area. Analytically, the significance is not merely that energy prices rose, but that the rise was unusually large in European-relevant energy categories, thereby creating a credible mechanism for large headline inflation effects and for downstream cost pressures through production and distribution channels.

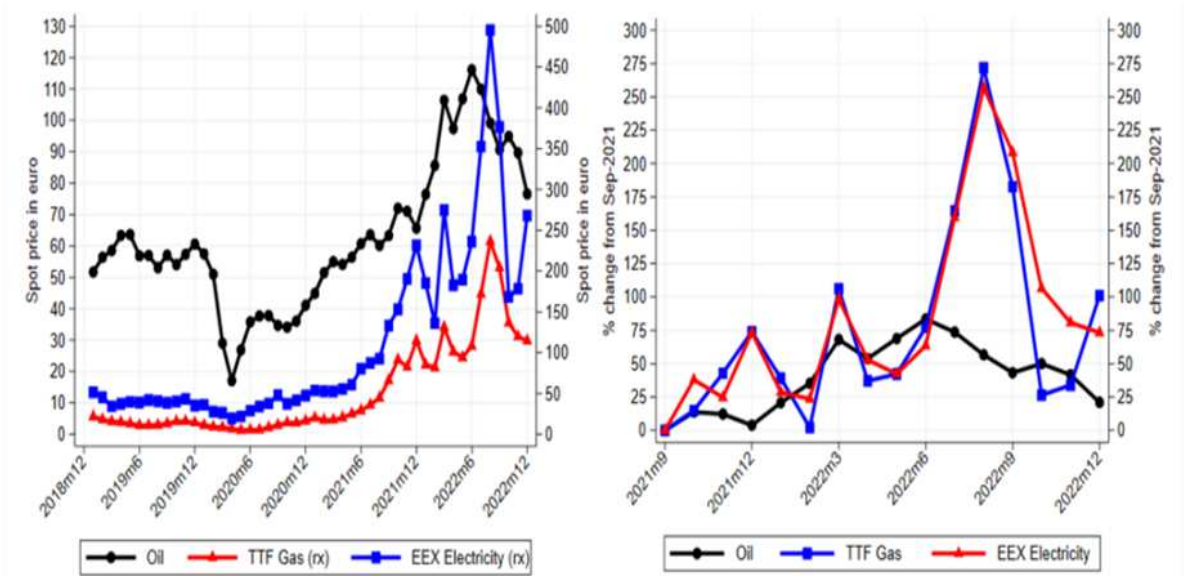
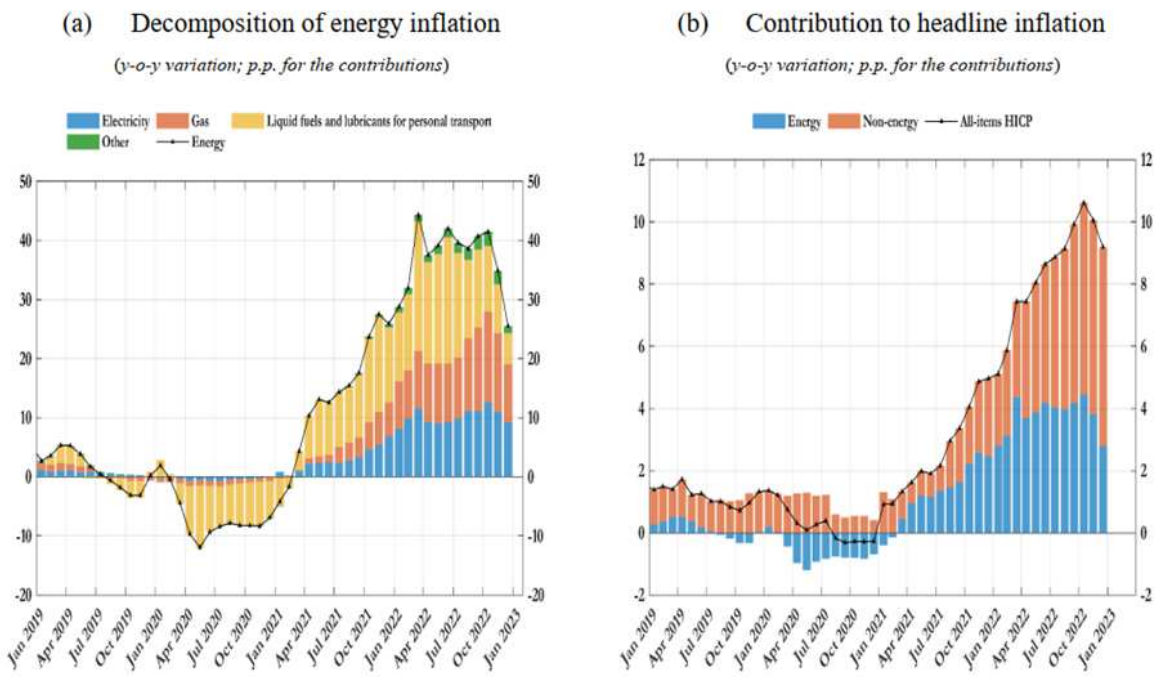


Figure 8: *Developments in energy prices*

4.3.2 Energy inflation and its contribution to headline inflation in the euro area

Figure 9 (Neri et al., 2023) links energy inflation to headline inflation quantitatively. The paper states that headline inflation reached 10.6 per cent in October 2022, driven to a large extent by the energy component, which grew by more than forty per cent year-on-year and directly contributed roughly four percentage points to headline inflation variation (Neri et al., 2023). This figure provides a verifiable basis for decompositional claims: energy is not just correlated with inflation; it is measured as a large contributor to headline inflation during the peak. For the thesis, the analytical importance is that this empirical magnitude helps explain why Euro Area



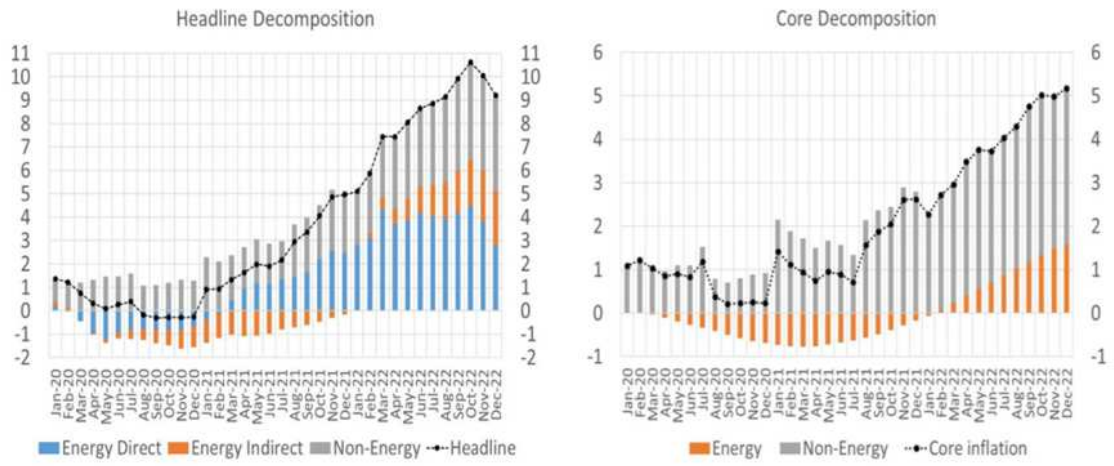
Source: authors' calculations on Eurostat data. Last observation: December 2022.

Figure 9: *Energy inflation and its contribution to headline inflation in the euro area*

inflation peaked later and more sharply in 2022, and it highlights a channel that is structurally more relevant in the Euro Area than in the United States because of energy import dependence.

4.3.3 Contributions of energy components to headline and core inflation

Figure 10 (Neri et al., 2023) separates direct and indirect contributions of energy components and explicitly reports that in 2022:Q4 headline inflation was directly affected by energy by almost four percentage points while indirect effects contributed roughly two percentage points; the paper states that energy inflation accounts for sixty per cent of headline inflation in that quarter (Neri et al., 2023). The analytical significance is that the figure supports a diffusion mechanism: energy influences headline inflation directly but also affects core components indirectly through production costs and pass-through. This is central to evaluating whether Euro Area inflation can be dismissed as "headline-only" and it provides empirical support for the claim that energy shocks can have meaningful effects on core inflation through indirect channels.



Source: Authors' calculations on Eurostat data. *Note*: The black solid line represents the series for headline inflation while the bars show the (direct and indirect) contributions of energy components.

Figure 10: *Contributions of energy components to headline and core inflation*

4.4 Demand versus Supply Decompositions Across Models

The reviewed studies provide decompositions using distinct frameworks: reduced-form multivariate modelling, semi-structural wage-price-expectations systems, and structural shock frameworks that incorporate external variables. Differences in conclusions often arise because identification restrictions differ and because the models place different weight on energy, labour market tightness, supply chain pressures, and demand dynamics.

4.4.1 AD and AS curves in the US and the EA

Figure 11 (Giannone & Primiceri, 2024) presents estimated aggregate demand and aggregate supply curves for the United States and the Euro Area, expressed with GDP as a log deviation from trend. The figure is empirically meaningful because it visualises how inflation responds to output movements within their estimated structure. The paper notes that the estimated aggregate demand curves for the United States and the Euro Area are "not as flat" as in an extreme strict inflation targeting example (Giannone & Primiceri, 2024). Analytically, this is important because it provides a disciplined explanation for why demand shocks can generate substantial inflation responses without necessarily producing proportionately large output deviations. In other words, the figure supports the mechanism underlying demand-driven narratives: when the aggregate demand curve is sufficiently flat, demand expansions are reflected more in inflation than in sustained output booms.

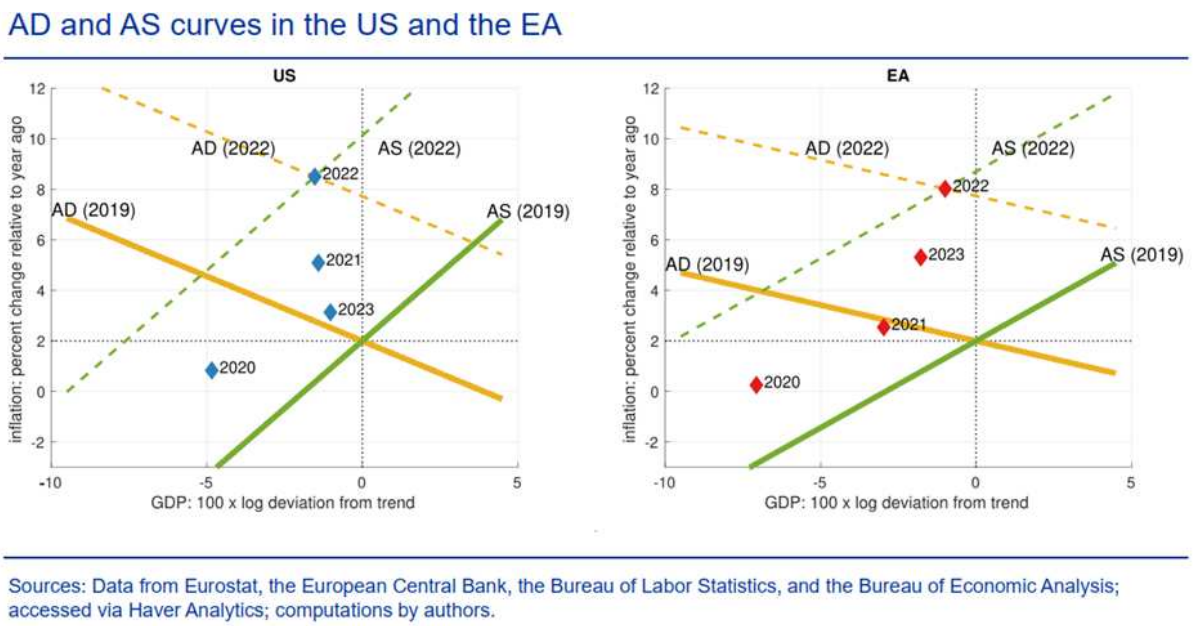


Figure 11: *AD and AS curves in the US and the EA*

4.4.2 Sources of price inflation in the euro area (decomposition of annual HICP inflation)

Figure 12 (Arce et al., 2024) decomposes annual Harmonised Index of Consumer Prices inflation in the Euro Area from 2020Q1 to 2023Q2 into contributions from initial conditions, labour market, energy, food, shortages, productivity, lockdown, residuals, and total annual HICP inflation (Arce et al., 2024).

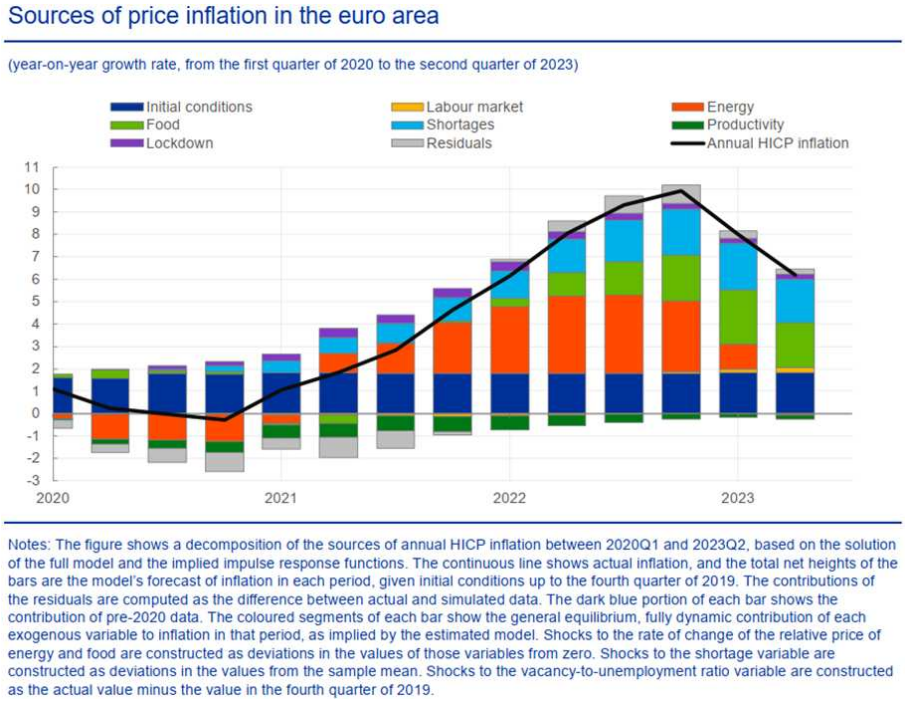


Figure 12: *Sources of price inflation in the euro area (decomposition of annual HICP inflation)*

The chart is extremely valuable because it makes explicit what many narratives leave implicit: Euro Area inflation is explained as a combination of energy and food shocks, supply constraints ("shortages"), labour market tightness, and residual factors.

The paper further notes that in the absence of pandemic-era shocks considered, inflation would likely have remained below two per cent on average, based on the contribution of initial conditions (Arce et al., 2024). Analytically, this evidence provides an internally consistent explanation for Euro Area dynamics: a large energy component raises headline inflation mechanically, while shortages and labour market contributions provide channels for persistence and for core inflation pressures.

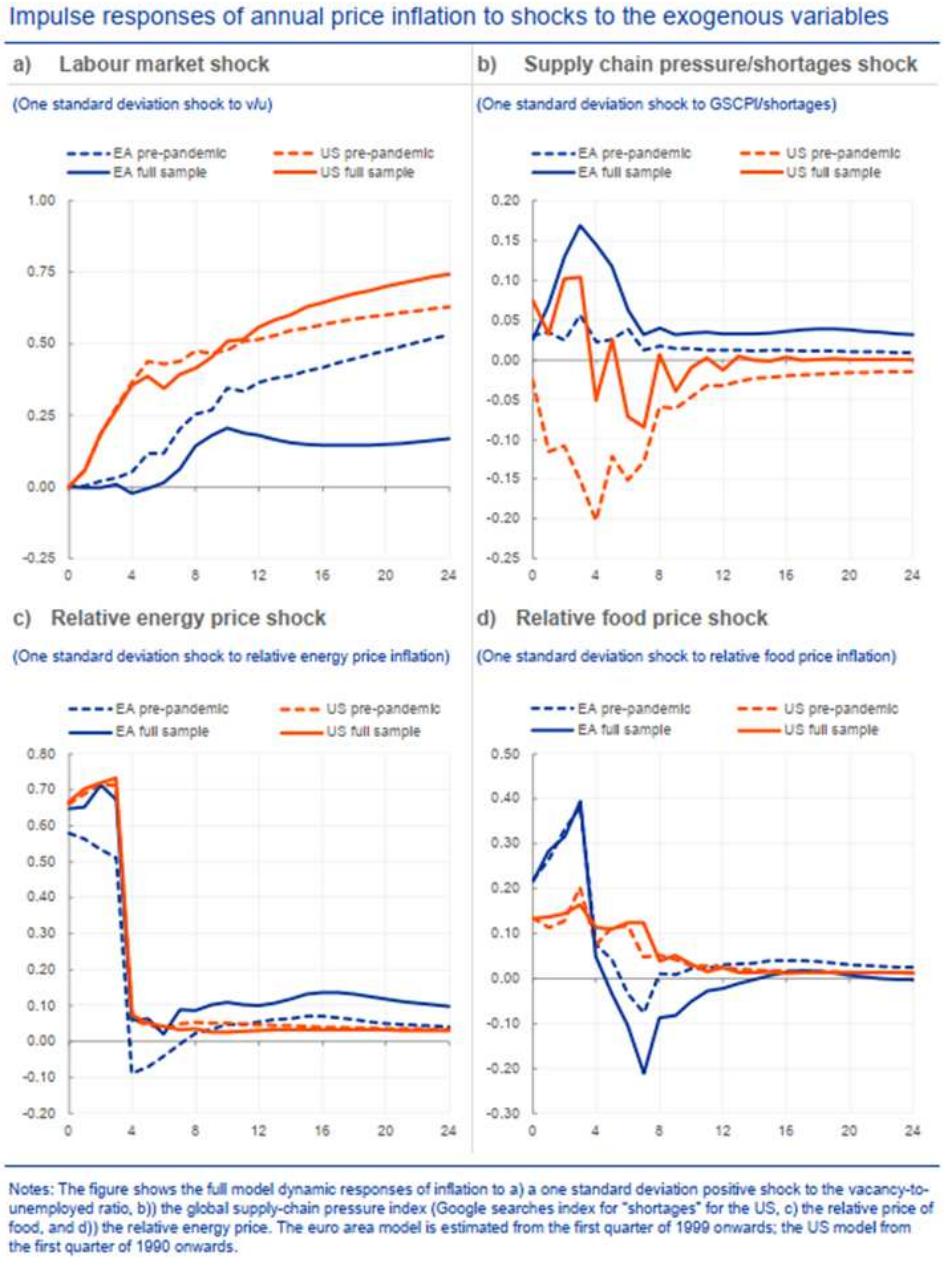


Figure 13: *Impulse responses of annual price inflation to shocks to exogenous variables*

4.4.3 Impulse responses of annual price inflation to shocks to exogenous variables

Figure 13 (Arce et al., 2024) shows impulse responses of annual price inflation to a labour market shock and a supply chain pressure or shortages shock, comparing the Euro Area and the United States under pre-pandemic and full-sample estimations (Arce et al., 2024).

The chart provides verifiable comparative evidence that inflation responds to labour market tightness and to supply chain pressures, with differences in persistence across regions and sample definitions. The analytical value lies in mechanism testing: if inflation responds strongly and persistently to shortages shocks, then supply constraints can be more than short-lived price level effects; if labour market shocks generate inflation persistence, then wage-price dynamics matter for the continuation of inflation even after headline shocks fade.

4.5 Cross-Atlantic Comparison

A careful cross-Atlantic comparison should avoid simplistic claims that the United States was "demand-driven" while the Euro Area was "supply-driven." The evidence instead supports a more precise statement: the timing and composition of inflation differ across economies, and the models attribute different relative shares to demand and supply channels depending on identification strategy and measurement. Giannone and Primiceri (2024) document that both economies experienced large inflation increases across indices and show that energy-price inflation rose and fell sharply in tandem in the United States and the Euro Area (Giannone & Primiceri, 2024, Figure 4). At the same time, their Figure 2 shows that the United States recovery in consumption was faster than in the Euro Area (Giannone & Primiceri, 2024), which is consistent with stronger demand conditions in the United States.

For the Euro Area specifically, Neri et al. (2023) provide a quantitative anchor for energy's role by showing that energy inflation contributed roughly four percentage points directly to headline inflation variation during the October 2022 peak and that energy accounted for sixty per cent of headline inflation in 2022:Q4 when direct and indirect contributions are considered (Neri et al., 2023, Figures 4.3b and 4.3c). This evidence does not contradict demand-based contributions; rather, it clarifies that energy provides a dominant and empirically large driver of headline dynamics in the Euro Area. Meanwhile, fiscal-shock decompositions and historical decompositions in Mori (2024) provide a distinct factual basis for why fiscal forces are emphasised for the United States, with the paper describing fiscal contributions as unusually dominant during the post-COVID episode (Mori, 2024, Figure 7).

The comparative inference that is most defensible, given the evidence, is therefore not a binary one. The United States displays strong evidence consistent with a large fiscal-demand component (Mori, 2024), while the Euro Area displays strong evidence of large energy-price contributions

and meaningful indirect propagation to core inflation (Neri et al., 2023). Both economies exhibit broad inflation across indices and a post-pandemic configuration where demand recovery and constrained supply jointly matter, with different channels more salient in each region.

4.6 Comparative Evaluation of Competing Explanations

The empirical evidence assembled above allows a structured evaluation of three competing explanations: a supply-dominant view, a demand-dominant view, and an interaction view in which demand, supply, and policy jointly shape inflation.

The pure supply view gains substantial factual support in the Euro Area case because energy prices and energy inflation contributions are quantified as very large in 2022. Neri et al. (2023) explicitly show that energy inflation contributed roughly four percentage points directly to headline inflation variation and that the combined direct and indirect contributions imply energy accounting for sixty per cent of headline inflation in 2022:Q4 (Neri et al., 2023, Figures 4.3b and 4.3c). Moreover, the presence of indirect effects supports the idea that energy shocks can propagate beyond headline inflation, increasing the plausibility of supply-driven persistence mechanisms.

However, the pure supply view becomes less complete when considering broader price measures and wage-price dynamics. Giannone and Primiceri (2024) show inflation rising across several indices in both economies (Giannone & Primiceri, 2024, 4.1b), and Arce et al. (2024) decompose Euro Area inflation into multiple contributors, including labour market and shortages channels alongside energy and food (Arce et al., 2024, Figure 12). These decompositions demonstrate that the inflation episode cannot be reduced to energy alone, even in Europe, because other components contribute to the observed inflation path within the model-based accounting.

The pure demand view gains its strongest support in the United States context from Mori (2024), whose historical decomposition describes fiscal inflation as unusually dominant in the post-COVID run-up (Mori, 2024, Figure 7). In addition, Giannone and Primiceri (2024) show that consumption recovered faster in the United States than in the Euro Area relative to pre-pandemic projections (Giannone & Primiceri, 2024, 4.1a), providing a factual demand-side correlate. Yet demand-alone interpretations become incomplete if they ignore the compositional evidence showing the prominence of energy and tradables pressures, especially where energy contributions are measured as large and where shortages shocks have measurable inflation responses (Arce et al., 2024, Figure 13; Neri et al., 2023, Figure 10).

The interaction view is therefore the most empirically defensible synthesis given the evidence. The data and decompositions across papers support the claim that inflation dynamics reflect an interaction between demand recovery (visible in the consumption and inflation patterns)

and large sectoral supply constraints (visible in energy price dynamics and shortages-related mechanisms), with policy shaping the inflation-output trade-off. Giannone and Primiceri (2024) provide a structural visualisation of this interaction through their estimated aggregate demand and aggregate supply curves, which help explain how demand expansions can translate into inflation rather than output, depending on the slope of aggregate demand (Giannone & Primiceri, 2024, Figure 11). Arce et al. (2024) complement this perspective by showing that multiple sources contribute to Euro Area inflation, including energy, shortages, and labour market forces (Arce et al., 2024, Figure 12), thereby providing a model-consistent framework for understanding how an initially sectoral shock can broaden into persistent inflation.

Overall, the comparative evaluation suggests that the evidence supports a strong fiscal-demand emphasis for the United States in the post-2020 recovery (Mori, 2024), while supporting a strong energy and supply-propagation emphasis for the Euro Area in 2022 alongside broader contributing forces (Neri et al., 2023; Arce et al., 2024). The synchronised rise in inflation across indices and the measurable presence of multiple contributing channels imply that monocausal explanations are empirically fragile. It is therefore plausible to conclude that post-pandemic inflation was produced by a demand recovery interacting with severe sectoral supply constraints, with different channels dominating at different moments and with different intensities across the Atlantic.

5 Policy Implications and Conclusion

The post-pandemic inflation episode represents one of the most significant macroeconomic events of the past four decades. Inflation rose rapidly in both the United States and the Euro Area during 2021–2022, reached multi-decade highs, and subsequently began to decline following monetary tightening and the easing of supply constraints. The central objective of this thesis has been to examine the drivers of this inflation episode, compare the transatlantic experience, and assess the relative contributions of fiscal policy shocks, demand recovery, energy price shocks, and global supply constraints.

The empirical evidence assembled from Giannone and Primiceri (2024), Mori (2024), Arce et al. (2024), Neri et al. (2023), and Ascari et al. (2024) suggests that post-pandemic inflation cannot be reduced to a single cause. Instead, it reflects an interaction between demand expansion and constrained supply, with energy shocks playing a particularly large role in the Euro Area and fiscal shocks appearing especially prominent in the United States. This final chapter derives policy implications from those findings and articulates the broader lessons for fiscal and monetary frameworks.

5.1 Implications for Monetary Policy

A central policy question raised by the inflation episode concerns the appropriate response of central banks in the presence of large and heterogeneous shocks. The evidence reviewed in this thesis highlights two critical dimensions: the inflation–output trade-off and the credibility of inflation targeting regimes.

Giannone and Primiceri (2024) show that forcing inflation immediately back to the two per cent target would have implied substantial output losses. Their model-based counterfactual indicates that strict stabilisation would have required a cumulative GDP loss of approximately 4.5 per cent, with economic activity significantly below realised levels. This finding underscores the classical stabilisation dilemma: monetary tightening sufficient to offset strong demand forces can impose significant real economic costs, particularly when the economy is already weakened by adverse supply conditions.

The implication is not that central banks should tolerate inflation indefinitely. Rather, the evidence suggests that the speed and intensity of tightening must account for the origin of the inflationary shock. When inflation is partly driven by energy and supply constraints, aggressive tightening may dampen domestic demand without resolving the underlying supply disturbance. In such cases, monetary policy primarily works through second-round effects and inflation expectations rather than through direct control of energy prices.

At the same time, the persistence of inflation excluding energy and the presence of labour market contributions in Arce et al. (2024) indicate that supply shocks can evolve into broader inflation dynamics if left unaddressed. Therefore, monetary authorities face a sequencing problem: avoid over-tightening in response to temporary supply shocks, but prevent supply-induced inflation from becoming entrenched through expectations and wage dynamics.

The post-pandemic episode thus reinforces the importance of credible inflation targeting frameworks. As shown by Giannone and Primiceri (2024), inflation expectations remained relatively anchored despite large shocks. This credibility allowed central banks to tighten policy without triggering destabilising expectation spirals. The preservation of credibility emerges as a central institutional asset in managing future inflation shocks.

5.2 Implications for Fiscal Policy

The evidence from Mori (2024) suggests that fiscal shocks played a quantitatively significant role in the United States inflation episode. If fiscal expansions contribute meaningfully to aggregate demand and inflation, then fiscal policy cannot be treated as neutral with respect to price stability. The policy implication is not that countercyclical fiscal support during crises is undesirable. On the contrary, large fiscal interventions in 2020 were necessary to prevent economic collapse.

However, the interaction between fiscal expansion and monetary accommodation matters. When fiscal stimulus coincides with supply constraints and highly accommodative monetary conditions, aggregate demand may rebound faster than supply capacity, generating inflationary pressure. This dynamic was visible in the rapid recovery of consumption in the United States relative to pre-pandemic projections.

For the Euro Area, Ascari et al. (2024) show that fiscal contributions to inflation are present but more moderate than in the United States. Fiscal policy in the Euro Area was less synchronised and more gradual, partly due to institutional constraints. The implication is that fiscal-monetary coordination and the timing of fiscal withdrawal are critical in inflationary environments.

A key lesson emerging from this episode is that fiscal frameworks should incorporate explicit inflation considerations during recovery phases. While fiscal stimulus is essential during deep recessions, the withdrawal of extraordinary measures should be calibrated once supply capacity remains constrained. Failure to adjust fiscal stance in a timely manner may amplify inflationary pressures and increase the burden on monetary authorities.

5.3 Energy Policy and Supply Resilience

One of the most striking findings from Neri et al. (2023) is the magnitude of energy's contribution to headline inflation in the Euro Area. Energy accounted for roughly sixty per cent of headline inflation in late 2022 when direct and indirect contributions are considered. This empirical fact has structural policy implications.

First, it highlights the macroeconomic vulnerability associated with energy import dependence. When energy price shocks transmit directly into headline inflation and indirectly into core components, macroeconomic stability becomes contingent on external commodity markets. Second, it underscores the importance of energy diversification and supply resilience as macroeconomic stabilisation tools, not merely environmental or geopolitical objectives.

The policy lesson extends beyond short-term inflation management. Structural investment in renewable energy, storage capacity, and diversified supply chains can reduce the pass-through of future energy shocks into inflation. In this sense, energy policy becomes part of macroeconomic risk management.

5.4 Transatlantic Differences and Policy Design

The comparative evidence in this thesis demonstrates that while inflation rose in both the United States and the Euro Area, the composition differed. The United States displayed stronger evidence of fiscal-demand contributions, while the Euro Area exhibited a particularly strong energy component. These differences imply that policy design should be context-specific rather than uniform.

In economies where fiscal expansion is dominant, fiscal restraint and tighter coordination with monetary policy may be central. In economies where imported energy shocks are dominant, structural energy policy and supply diversification may play a larger role alongside monetary stabilisation.

The broader implication is that inflation management requires an integrated framework that recognises the source of shocks. A one-size-fits-all tightening response may be inefficient if inflation drivers differ structurally across economies.

5.5 Contribution, Limitations and Future Research

5.5.1 Contribution

This thesis contributes to the growing literature on post-pandemic inflation in three distinct ways.

First, it provides a structured and comparative synthesis of leading empirical and semi-structural studies analysing the United States and the Euro Area. While individual papers such as Giannone and Primiceri (2024), Mori (2024), Arce et al. (2024), Neri et al. (2023), and Ascari et al. (2024) focus on specific mechanisms or jurisdictions, this thesis integrates their findings within a unified analytical framework. By systematically comparing model-based decompositions, impulse responses, and historical shock attributions, the thesis clarifies where conclusions converge and where they diverge. This comparative dimension allows for a more nuanced interpretation than country-specific analyses alone.

Second, the thesis contributes by distinguishing between headline inflation dynamics and compositional drivers. Rather than treating inflation as a single aggregate phenomenon, the analysis carefully examines sectoral contributions, especially energy and tradables components in the Euro Area, and fiscal-demand contributions in the United States. By grounding each interpretation in explicitly referenced figures and decompositions, the thesis demonstrates that the inflation episode was heterogeneous in origin and transmission mechanisms across the Atlantic. This compositional approach helps avoid the oversimplification often present in public policy debates.

Third, the thesis contributes conceptually by evaluating competing explanations: supply-dominant, demand-dominant, and interaction-based frameworks, using verifiable empirical evidence. Rather than endorsing a monocausal narrative, it shows that the interaction between rapid demand recovery and constrained supply, particularly in energy markets and global production networks, provides the most empirically defensible account of the 2021–2022 inflation surge. This synthesis advances the understanding of how fiscal policy, monetary policy, and structural shocks jointly shape inflation outcomes in advanced economies.

Taken together, the contribution of this thesis lies not in producing new econometric estimates, but in delivering a rigorous, evidence-based comparative evaluation that clarifies the mechanisms behind one of the most significant inflation episodes in recent decades.

5.5.2 Limitations

Despite its analytical depth, this thesis faces several limitations that must be acknowledged. First, the analysis relies on existing model-based decompositions rather than conducting original econometric estimation. Structural vector autoregressions, semi-structural Phillips curve models, and dynamic decompositions depend critically on identification assumptions. Sign restrictions, parameter stability, and the treatment of expectations can influence the estimated contribution of fiscal and supply shocks. As such, the conclusions drawn in this thesis inherit the model-dependent nature of the underlying studies.

Second, cross-paper comparability is inherently constrained by methodological heterogeneity. Giannone and Primiceri (2024) employ a multivariate statistical model, Mori (2024) uses a structural VAR with fiscal shock identification, Arce et al. (2024) apply a semi-structural wage–price–expectations framework, and Neri et al. (2023) focus on energy pass-through mechanisms. Because each framework isolates shocks differently and operates at different levels of aggregation, the relative magnitudes of demand and supply contributions cannot be interpreted as directly comparable quantitative shares across models. The thesis therefore emphasises qualitative consistency and mechanism alignment rather than exact numerical equivalence.

Finally, the thesis focuses exclusively on advanced economies, specifically the United States and the Euro Area. While this comparison is analytically meaningful due to their global macroeconomic importance, it limits the generalisability of conclusions to emerging markets or energy-exporting economies, where the transmission mechanisms may differ significantly. Acknowledging these limitations strengthens the credibility of the findings by clarifying their scope and dependence on existing empirical frameworks.

5.5.3 Future Research

The findings of this thesis open several avenues for further research. A first direction concerns deeper empirical identification of fiscal shocks. While Mori (2024) provides strong evidence of fiscal contributions to United States inflation, future research could employ high-frequency fiscal announcements, narrative approaches, or cross-country panel identification to strengthen causal interpretation. Comparative fiscal multipliers in inflationary environments remain an area requiring further investigation.

A second avenue relates to global spillovers and production networks. The interaction between sectoral supply constraints and international trade linkages suggests that inflation transmission is not purely domestic. Future work could combine input-output network data with macroeconomic models to quantify more precisely how shocks propagate across borders and how exchange rate regimes modify these spillovers.

Third, further research could examine the role of expectations formation during the post-pandemic period. While inflation expectations remained relatively anchored according to the reviewed literature, understanding why expectations did not de-anchor despite historically high inflation could provide valuable insight into credibility, communication strategies, and institutional trust.

Fourth, the long-term interaction between energy transition policies and inflation dynamics warrants systematic study. If energy shocks have large macroeconomic consequences, then investment in renewable energy and diversification may serve not only climate objectives but also macroeconomic stabilisation objectives. Quantifying this dual role remains an important

research frontier.

Finally, as more post-2023 data become available, future studies can assess whether the inflation episode represents a temporary shock, a regime shift, or a precursor to structurally higher inflation volatility. This distinction will shape the design of fiscal rules, monetary frameworks, and debt sustainability strategies.

5.6 Conclusion

The post-pandemic inflation episode was neither purely supply-driven nor purely demand-driven. It emerged from the interaction of rapid demand recovery, large fiscal interventions, accommodative monetary policy, and severe sectoral supply constraints, especially in energy markets.

The empirical evidence reviewed in this thesis shows that:

- Inflation rose across indices in both economies.
- Energy shocks made quantitatively large contributions in the Euro Area.
- Fiscal shocks played an unusually prominent role in the United States.
- Monetary tightening involved substantial output trade-offs.
- Inflation expectations remained broadly anchored, preserving central bank credibility.

The key policy lesson is that inflation management requires coordination across monetary, fiscal, and structural domains. Monetary policy alone cannot resolve supply shocks. Fiscal expansion without regard to inflationary capacity constraints can amplify price pressures. Energy and supply resilience policies are integral to macroeconomic stability.

The episode ultimately reaffirms the importance of credible institutions, coordinated policy design, and structural resilience in navigating complex macroeconomic shocks. Future inflation challenges will likely differ in origin, but the lessons from 2021–2022 provide a valuable framework for interpreting and responding to them.

6 References

1. Arce, Ó., Ciccarelli, M., Kornprobst, A., and Montes-Galdón, C. (2023). *What caused the euro area post-pandemic inflation?* ECB Occasional Paper No. 343. European Central Bank.

2. Ascari, G., Bonam, D. R., Mori, L., and Smadu, A. I. (2024). *Fiscal policy and inflation in the euro area*. University of Pavia Working Paper.

3. Bernanke, B. S. (2022). *21st century monetary policy: The Federal Reserve from the Great Inflation to COVID-19*. W. W. Norton.

4. Bernanke, B. S., and Blanchard, O. (2024). *An analysis of pandemic-era inflation in 11 economies* (Working Paper No. 24-11). Peterson Institute for International Economics.

5. Blanchard, O. (2021). In defense of concerns about the American Rescue Plan. *Peterson Institute for International Economics RealTime Economics Blog*.

6. Blanchard, O., and Galí, J. (2007). Real wage rigidities and the New Keynesian model. *Journal of Money, Credit and Banking, 39*(1), 35–65.

7. Cochrane, J. H. (2023). The fiscal theory of the price level. *Econometrica, 91*(4), 1505–1536.

8. di Giovanni, J., Kalemli-Özcan, Ş., Silva, A., and Yıldırım, M. A. (2025). *Pandemic-era inflation drivers and global spillovers* (NBER Working Paper No. 31887, revised). National Bureau of Economic Research.

9. European Central Bank. (2023). *Economic Bulletin, Issue 2/2023: Understanding the drivers of inflation*. European Central Bank.

10. Fornaro, L., and Romei, F. (2024). An international perspective on inflation during the COVID-19 recovery. In *Handbook of inflation* (forthcoming chapter).

11. Giannone, D., and Primiceri, G. E. (2024). *The drivers of post-pandemic inflation*. ECB Forum on Central Banking, Sintra.

12. Mori, L. (2024). *Fiscal shocks and the surge of inflation*. Job Market Paper, University of Padova.

13. Neri, S., Palazzo, F., Pezone, V., and Tagliabracci, A. (2023). *Energy price shocks and inflation in the euro area* (Banca d'Italia Occasional Paper No. 792). Banca d'Italia.

14. Summers, L. H. (2021, February 4). The inflation risk is real. *The Washington Post*.

15. Uhlig, H. (2005). What are the effects of monetary policy on output? Results from an agnostic identification procedure. *Journal of Monetary Economics, 52*(2), 381–419.

16. Woodford, M. (2003). *Interest and prices: Foundations of a theory of monetary policy*. Princeton University Press.