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The post-pandemic inflation debate: a critical review

Diogo Martins (University of Massachusetts Amherst)[1]

Abstract

This article provides a critical review of the post-pandemic inflation debate. The first part structures the debate through the classification of the arguments into two broad categories (the neoclassical view and the critical political economy view) along with several subcategories. The classification is informed by the positions assumed by debate participants regarding the origin and propagation mechanisms of inflation, together with the economic policy solutions advanced to face the current inflationary episode. The second part is focused on showing that the hegemony of contractionary monetary policy as a policy response to address contemporary inflation is based on weak foundations, whose theoretical and empirical arguments have been consistently and convincingly disputed in critical political economy circles over the last decades.

Keywords: Inflation; pandemic; critical political economy; neoclassical economics; central banks; monetary policy.

JEL Codes: E12; E31; E32; E52; E61; E64

1. Introduction

For more than three decades, inflation was absent from the center of economic debate in major developed economies. A long period of low and stable inflation, which started in the early 1990s, relegated concerns about the social and economic impact of price increases to a secondary plane. Within the dominant currents of contemporary economic thought and the main national and international institutions prevailed a broad consensus according to which the institutional innovations then adopted, grounded in a new theoretical consensus within the discipline, had turned inflation into a problem of the past. As long as those rules and institutions were not abandoned, inflation would not be a threat to macroeconomic stability in developed economies.

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Confidence in the permanent ability to control the instabilities of capitalism is not historically unprecedented. In fact, it is a common delusion in capitalism history. Between World War II and the late 1970s, the golden age of the Keynesian consensus, economists thought they had found the ultimate solution to involuntary unemployment. In the 1990s, amid the Great Moderation, they believed they had been able to put an end to economic cycles and crises. But quickly the stagnation of the 1970s and the financial crisis of 2008 proved that the triumphalism of those who thought they had found the ingredients to tame the intrinsic instability of capitalism had been greatly exaggerated. This time was not different. After the pandemic, and without any central bank or relevant international institution having anticipated it, inflation returned to be a macroeconomic source of concern in developed capitalist economies.

Following the unexpected emergence of inflation, an intense debate has been taking place in the academic and public spheres, involving governments, central banks, politicians, and academics. The terms of the debate are centered questions questions such as: what is the cause of the inflationary process? Is it permanent or temporary? How should governments and central banks react?

To answer these questions, the article is divided into two main sections. The first section aims to map the terms of the debate. To this end, it is proposed to divide the existing views into two categories (*the neoclassical view* and the *critical political economy view*) and a few subcategories. The interpretations and proposals of researchers and policymakers belonging to each of these views are carefully reviewed, resulting in the structured synthesis of the post-pandemic inflation debate. The second section is centered on scrutinizing the theoretical and empirical foundations of contractionary monetary policy as a central policy to address contemporary inflation. It is shown that most theoretical assumptions and empirical arguments used to support the generalized rise in interest rates across the world face several shortcomings, systematically highlighted by critical political economists in the contemporary debate and in the past few decades.

2. The post-pandemic inflation debate: a structured survey

In this section, we propose to frame the contemporary debate on inflation through the definition of two main interpretational views: the *neoclassical view and the critical political economy view*. To encompass important analytical differences within the former, the *neoclassical view* is then divided into three subcategories: the *monetarist (unconditional excess demand view),* the *conditional excess demand view,* and *the central bank view.* The profiles and sub-profiles are derived from the different positions assumed in the debate regarding the origin of the inflationary process, its propagation mechanisms, and the public policy solutions that are proposed. It is always challenging to establish well-defined profiles in an ongoing

discussion in which the authors present differences in the details of their arguments. The risk of oversimplification is always present, but the adoption of classifications with excessive attention to detail would create a dense and unmanageable discussion. Here, we seek to pursue a balanced path, interpreted as the one that most contributes to the clarification of the terms of the debate, providing a relevant addition to current knowledge

2.1. The neoclassical-inspired view

In the context of this review, the concept of "neoclassical economics" is alluded in a broad sense, comprising different syntheses and currents of neoclassical thought throughout the 20th century, whose relevant characteristics for the discussion will be detailed throughout the text. However, all these variants converge in two central and interrelated characteristics that give it the possibility of being grouped in a single analytical category: (i) *adherence to the classical dichotomy* (albeit in stronger and weaker versions), which translates into a clear division of the economy into a real dimension, where relative prices are established and determine the allocation of resources, and a monetary sphere, corresponding to the stock of money needed to perform purchases. In the short term-term, the monetary sphere can have real economic effects, but, in the long run, monetary and fiscal policies can only influence the general price level. In sum, the long-run equilibrium is invariant to aggregate demand; and (ii) the view that the *propagation* of *inflation is necessarily reduced to two scenarios*, which may or may not coexist simultaneously, depending on the positions in the debate: *a scenario of excess demand/positive output gap* (motivated by an excessive expansion of actual output or a contraction of potential output) and/or a *scenario of decoupling inflationary expectations*, which may or may not be related to excess demand.

2.1.1. Origins of inflation

Within the *neoclassical view*, the *monetarist (unconditional demand)* view and *the conditional excess demand view* converge in considering that the current inflation results from an excess of aggregate demand – that is, from the existence of *ex ante* consumption and investment intentions that exceed the productive capacities of the economy, leading to a generalized increase in prices. Nevertheless, they disagree on the reasons that led to the realization of excess demand.

The Monetarist View

The strictest interpretation of the *neoclassical view*, which we will call *Monetarist*, maintains that inflation in this context is only the inevitable reflection of the great expansion of the money stock in the previous decade. It relies on the Monetarist insight according to which discretionary expansion in the money

aggregates inevitably provokes a rise in the general level of prices in the economy. This is the rationale behind the famous Monetarist advice, according to which central banks should let money stock to a stable rate of growth and abstain from using monetary shocks as a stabilization tool. The Monetarist perspective is based on a specific interpretation of the causality contained in the mathematical identity MV = PY, where M represents the money supply, V represents the velocity of money (which can be understood as a measure of the frequency of transactions in the economy), P represents the level general price and Y represents the real output of the economy. Assuming that the amount of money in circulation does not permanently influence the economy's production capacity (money neutrality), that the velocity of money (V) is constant, and that the economy is always close to full employment (so that Y is also constant), the Monetarist conclusion is that the growth rate of the money supply (M) defines the growth rate of the general price level (P), i.e., inflation. In this way, there is no room for a meaningful utilization of monetary policy as a stabilization policy: a stimulus provided by an increase in money aggregates will ineluctably lead to a general increase in the price level. The words of Steve Hanke are a good summary of this position in the context of the current discussion: “There is only one cause of inflation, and that is excessive growth in the money supply. (…) When the COVID pandemic hit in February of 2020, the Fed [Federal Reserve] put their foot on the gas pedal (…) They started creating a lot of money. This, in turn, led to the highest inflation in over 40 years in 2022” (Hanke, 2022).

A common derivation in the Monetarist interpretation is made through the reference to the *fiscal theory of price level* (Cochrane, 2023). Popular in the 90s and early 00s (greatly because it provided theoretical support for fiscal frugality for the then-new inflation-targeting era), the core idea behind the theory is that fiscal expansions that are not offset by raising taxes will inevitably lead to inflation. The price level will endogenously have to adjust over time so that states can satisfy their intertemporal budget constraint. Although resting in a more sophisticated narrative, the direction of causality follows the same Monetarist pattern: fiscal expansions financed by discretionary monetary expansions will cause an increase in the price. If not through a simple excess demand mechanism, through the need to satisfy the intertemporal budget constraint of states.

The Monetarist stance is also referred to as the unconditional demand view because of the argument that the actions of central banks and governments would inevitably lead to inflation in the near future, regardless of the economic conditions experienced at the time. In that sense, the link between monetary/fiscal policy, excess demand, and inflation is unconditional. Within this line of reasoning, there is a widespread belief that reality is finally proving that those who opposed unconventional monetary stimulus in the last fifteen years were actually right. This feeling is clearly expressed in the title of one of the articles signed by the notorious supply-side economics advocate John H. Cochrane, published in Project Syndicate: it is “*the end*

of an economic illusion" (Cochrane, 2022). The contemporary inflation crisis unveils the wrong interpretation of secular stagnation as a phenomenon with demand roots. There is no role for demand in promoting long-term growth. That is, in their regard, a mistaken view that has finally come to an end: "The era of wishful thinking is over. Those who come to grips with that fact now will look a lot less foolish in the future" (Cochrane, 2022).

It is important to underline that the Monetarist interpretation constitutes a minority view inside the neoclassical space. It is not shared by the most influential contemporary neoclassical economists nor by the communication of major central banks. This view is largely confined to the intellectual group who remained faithful to the orthodox Monetarist reasoning, even when the majority of the profession moved to some derivation of New Keynesian/New Consensus Macroeconomics. In the present debate, it had a marginal reception and impact on public and academic debates. However, this does not mean that the Monetarist emphasis on monetary aggregates was completely unable to restore its appeal during this debate. An example of that ability can be found in one of the columns of Martin Wolf, an influential columnist for the Financial Times: "(…) central banks have to reconsider some of their recent doctrines. Just as inflation showed that the financial system matters, the inflationary surge showed that money matters […] Yes, you cannot run the economy through the money supply. But it cannot be ignored either" (Wolf, 2022).

The conditional excess demand view

The *conditional excess demand view* is the first of the two views that dispute the hegemony in the neoclassical field. The central argument of proponents of this view is that inflation emerged because governments and central banks acted based on a wrong diagnosis of the nature of the recession caused by the pandemic and, therefore, applied inappropriate policies. Policies were designed for a recession in a slow recovery, in which persistence effects (hysteresis) and negative expectations would expectably lead the economy to slowly return to its equilibrium state. Contributing to this forecast was the experience of the recession that followed the Great Financial Crisis of 2007-08, characterized by a slow recovery in output and employment. In this way, central banks and governments were led to believe that the policies used to deal with the previous crisis could be repeated, especially in a context in which economic contraction was even larger, suggesting more persistent effects in the recessionary bias. In fact, well on the contrary, the developed economies recovered more quickly, moving closer to a V-shaped trajectory (a sharp drop followed by a relatively quick recovery), partly due to policies aimed at supporting employment and disposable income. This wrong diagnosis led them to adopt expansionist policies *beyond* what would be advisable, given the pattern of recovery that was being observed. That misguided decision was, according to this interpretation, at the root of the inflationary process.

Hence, this view is *conditional* in the sense the demand created by monetary and fiscal policies is not perceived as doomed to lead to inflation, as in the *Monetarist view*. It led to inflation *conditional* on a bad diagnostic of the position of the economy relative to its potential level. Because the economy was closer to the potential level than expected, inflation surged, but that would not have been the case if the diagnosis was correct.

This idea is clearly expressed by Ricardo Reis, an LSE professor who achieved prominence in the last decade in monetary policy debates due to his pioneer role in HANK models. He states: "Perhaps influenced too much by the experience of the great financial crisis, many expected lasting scars from the COVID recession. Avoiding a sharp drop required a strong response. Instead, the economy quickly recovered even before the end of 2020. Between the end of the second quarter of 2020 and the end of 2021, real GDP grew by 14.9% in the United States and 17.5% in the euro area. […] Instead of scars and hysteresis, the economy showed intertemporal substitution capacity between production and consumption" (Reis, 2022). The same view is shared by Larry Summers, who maintains that central banks decided to keep the stimulus programs beyond what was reasonable, despite observing this trajectory. "We had an economy where income was running short by $50 billion a month because of the pandemic, and we injected $150 billion to $200 billion a month into that economy. It's perhaps not surprising that that's led to an overflow of demand, which has generated inflation that on the CPI [Consumer Price Index] measure has risen to 7 percent" (Summers, 2022). Ben Bernanke is equally assertive in declaring demand as the primal force behind current inflation. Establishing a parallel with the origin of inflation in the 70s, he states: "The inflation of a half-century ago, like today's, began after a long period when inflation was generally low. In both cases, heavy federal spending (on the war in Vietnam and Great Society programs in the 1960s, on the response to COVID-19 in 2020 and 2021) added to demand. And shocks to global energy and food prices in the 1970s made the inflation problem significantly worse" (Bernanke, 2022). In the last part of this quote, Bernanke mentions the role of supply forces, but only as having an amplifying role. The primal cause is clearly assigned to fiscal and monetary expansions. The same remark is made by Jason Furman: "the point is not that there are no supply-chain issues. (…) But this is not necessarily evidence of an adverse change in supply. If we gave every household millions of dollars, that, too, would lead to pileups at ports and overloaded manufacturers. The fact that quantities are up so much (…) suggests that our problem is not mainly reduced supply but increased demand (Furman, 2022).

Key to the bad judgment of central banks, following this line of reasoning, was a misinterpretation of the nature of the shocks. Central banks interpreted the shocks associated with the constraints of global value chains, first, and energy costs, second, as mere cyclical shocks, in which inflation would be the result of a temporary adjustment in firms' markups: "The diagnosis of central banks was similar in all advanced

economies. In Phillips curve terms, policymakers interpreted all shocks as temporary margin shocks (…). That diagnosis was doubtful, both at the time and in hindsight. Many of these shocks can also be interpreted as potential output shocks. For example, the problem of global supply chains affects the actual technology used to produce goods, not just the market power of companies. Furthermore, if the course of globalization were to change, as some have argued, this would likely affect the productive capacity of the economy" (Reis, 2022). For this interpretation, inflation was never the result of a temporary markup shock, but of a positive output gap caused by two mutually reinforcing factors: the increase in demand caused by the expansionary monetary policy pursued by central banks (causing an increase in actual GDP) and a fall in potential GDP, caused by constraints in global supply the energy shocks that followed.

The central banks' view

The second interpretation that disputes the hegemony within the neoclassical view is here conceptualized under the name of *the central banks' view*. It corresponds to the interpretation of events outlined by the Federal Reserve (FED) and the European Central Bank (ECB). Understanding the nuances of this interpretation is fundamental not only to understanding the existing heterogeneity in the neoclassical field but also to correctly understanding the bold inflection of the narrative of central banks during this debate.

This view contrasts with the previous ones in two fundamental domains. First, *it rejects the idea that the expansionist monetary and fiscal policies followed by central banks were responsible for the outbreak of inflation*. On the contrary, the proponents of this version consider that the fiscal and monetary stimulus programs were important to leverage the recovery of economies after the recession verified in 2020, avoiding negative hysteresis effects verified in previous recessions. Secondly, *the most relevant origin of inflation is assigned to the persistent constraints in post-COVID production chains and the rise in prices of key raw materials in response to the war in Ukraine*. That is, the origin of inflation was primarily on the supply side.

In November of 2021, when the first signs of increasing inflation were already felt in the Eurozone, Christine Lagard clearly rejected the role of excess demand. "Currently, the Eurozone is experiencing strong demand as a "catch-up" phenomenon, but we do not see excessive demand. Aggregate demand is currently below the pre-crisis level" (ECB, 2021). In the same communication, the argument of inflation being caused by a fall in potential output was also rejected. On the contrary, it is argued that the monetary expansion was essential to preserve potential output: "At the same time, we have no reason to believe that aggregate supply has fallen significantly, causing the output gap to close from above. In fact, the extraordinarily successful policy response in the euro area was designed precisely to preserve our supply capacity." (ECB, 2021).

The same view was shared by the FED. The view of generalized excess demand was discarded, at the same time, the performance of the labor market was not seen as a source of concern but rather as an indicator of the effectiveness of the monetary policy reaction to the COVID crisis: "The spike in inflation is so far largely the product of a relatively narrow group of goods and services that have been directly affected by the pandemic and the reopening of the economy. (…) These effects, which are adding a few tenths to measured inflation, should wash out over time. (…) the economy is on a path to just such a labor market, with high levels of employment and participation, broadly shared wage gains, and inflation running close to our price stability goal" (FED, 2021).

Importantly, despite their notorious policy turn during the inflation debate, neither the FED nor the ECB changed their position regarding the origins of inflation, refusing to accept that monetary policy was the main driver of inflation, as argued by the proponents of *conditional excess demand*. The stance of central banks changed across the debate, not regarding the origin, but regarding the mechanisms of propagation and solutions to address inflation, as it will become clear in the next sections.

3.1.2. Propagation mechanisms

Within the *neoclassical view*, the propagation mechanism is based on the interaction between expectations and the labor market, although the reference to the latter is sometimes only implicit. Regardless of its origin, inflation is propagated over time through a pressure for increases in nominal wages. The causality of this propagation is clear and runs from nominal wages to inflation. In other words, the wage demands of the workers are the cause of the propagation of inflation in time.

The modeling of expectations and the structure of the labor market depends on the type of Philips curve present in the analysis. The Phillips curve establishes the relationship between the level of unemployment and the evolution of nominal wages. There are two popular ways of establishing the functional structure of the Phillips curve within the neoclassical field, which has been disputing hegemony over the last few years: the triangular model and the Phillips curve of the new neoclassical synthesis (Gordon, 2011). *In common, they have the essential conclusion that in the long run, the Phillips curve is vertical at an exogenous level of unemployment, which cannot be altered by aggregate demand* (depending on structural and institutional factors, such as the mobility of the labor force and labor legislation). The biggest difference between these two specifications concerns the specification of expectations. While the triangular model favors adaptive expectations (based on inflation in previous periods), the new neoclassical synthesis model uses forward-looking expectations.

With backward-looking/adaptative expectations, the relevant level of unemployment for building wage expectations is its value in the past period. Both in a perfectly competitive and in an imperfectly competitive

labor markets, levels of unemployment below the natural rate determine the immediate emergence of a wage-price spiral. On the other hand, with forward-looking expectations, the notion of the credibility of central banks regarding their adherence to the inflation target becomes central. If economic agents expect inflation to remain stable in the medium term (because they consider that the central bank's commitment to maintaining price stability is credible), the increase in wage demands may not take effect immediately in a context of excess demand, as agents will not fully incorporate current inflation into their expectations about the future evolution of inflation, hoping that it will return to the central bank's target in the medium term. However, if public decision-makers allow unemployment to remain below its so-called natural level – which corresponds to what is often called an “overheated labor market” – for a prolonged period, inflation expectations may “deanchor” from the target defined by the central bank (in other words, agents will expect higher levels of inflation in the future). Once this occurs, a wage-price spiral like the one described for the adaptive expectations framework should be expected.

With respect to the structure of labor markets. Monetarists tend to preserve the view of a competitive labor market, while the New Keynesian inspiration (prevalent in the conditional excess demand and central bank views) accepts some form of imperfect competition or principal-agent relationship in labor markets. While they are conceptually different (Stockhammer, 2008), such difference becomes negligible once an exogenous natural rate of unemployment/NAIRU is taken as an assumption.

Within the *neoclassical view*, the different stances regarding the propagation mechanisms of inflation can be understood by looking at the interaction of different assumptions about the Phillips curve and the relevance assigned to different shocks.

For an interpretation along *Monetarist* lines, expectations are backward-looking, while labor markets are perfectly competitive, following Friedman's (1977) contribution. In this setting, the chain of events is straightforward. The expansion in the monetary base creates a demand shock that pushes unemployment below its natural level. The general price level increases to clear the labor market. In the following periods, workers will update nominal wage claims based on the previous inflation level, which will lead to an accelerationist pattern of inflation. As expected, inflation results from a monetary shock, and the mechanism of propagation across time comes from workers' wage demands that are not consistent with the competitive equilibrium because unemployment is below its natural level.

The proponents of *the conditional excess demand view* consider that the combination of fiscal and monetary stimulus (expansion of actual output) and the detrimental effect of supply constraints on the production capacity of the economy (fall in potential output) brought unemployment below the NAIRU. That created a scenario in which the expected real wages of workers are inconsistent with the markup expectations of

firms, leading to a scenario of inflation. In their view, central banks were slow to respond to this propagation mechanism of inflation because (i) they misinterpreted the supply-side disruptions as temporary supply shocks instead of acknowledging their effect in increasing the NAIRU and (ii) they were overconfident in thinking that their credibility in terms of the commitment to achieving the inflation target in the medium term would be enough for workers not quickly including contemporary inflation in their forward-looking inflation forecasts. Expectations de-anchored much faster than central banks had predicted. This misjudgment avoided, in their view, a quick response to the problem. Given the accelerationist pattern of the propagation mechanism (embedded in the accelerationist nominal wage claims), this time-lag had a central responsibility in the dimension acquired by inflation.

The *central banks' view*, on the other hand, had two distinct positions with respect to the propagation mechanisms of inflation throughout the debate, whose comprehension is central to understanding their abrupt narrative turn.

From the beginning of the pandemic to March of 2022 (in the case of the FED)/May of 2022 (in the case of the ECB), central banks kept the stance that inflation was caused by an exogenous supply-side shock and there was not a likely threat of inflation propagating in the long term. That derived from two main propositions in central banking reasoning: (i) since they did not consider that inflation was increasing because of excess demand (output above potential output/unemployment below NAIRU) there was no risk of inflation expectations decoupling due to accelerationist nominal wage claims derived from reinforced bargaining power and (ii) since they considered the shock to be temporary and short-lived, there was not the risk of inflation over the target lasting for long enough to affect the medium-target of inflation, especially given the secular disinflationary pressures observed in the last decade and the credibility of central banks. "(…) we do not see the conditions – whether at the level of the economy as a whole or at the sectoral level – for inflation rates above our target to become self-sustaining. (…) for this to happen, an economy-wide "amplification mechanism" is usually needed, where output persistently increases above its potential level, with wages and prices rising. But we don't see that dynamic at work today in the eurozone" (ECB, 2021 November). This position lasted until late. In April, a month after the FED altered its stance and only one month before of ECB also promoted a change of narrative, Christine Lagarde declared: "So far, however, wage growth has remained weak (…) and inflation expectations in the eurozone remain around our target" (ECB, 2022a).

However, this position would change suddenly in March 2022 in the case of the Fed and in May 2022 in the case of the ECB. From that moment on, central banks began to acknowledge that inflation had the risk of becoming persistent because shocks that were thought to be temporary turned out to be much more persistent, largely due to the outbreak and persistence of the war in Ukraine.

However, importantly, this *does not imply* that central banks come to accept the criticism coming from other authors, which declared that inflation was a problem of excess demand from the beginning. It was, on the contrary, due to the persistence of shocks that would have been temporary unless completely exogenous and unpredictable events such as the war in Ukraine or the prolongation of lockdown policies in China had not taken place. In other words, for the neoclassical authors who emphasize the responsibility of central banks in the inflationary surge, central banks persisted in a policy error when they already had information sufficient for reversing their monetary policy stance; for central banks, the reversion in monetary policy was applied in a timely manner, responding to exogenous events that were unpredictable and not related with their past expansionist policies.

Events progressed fast: in May, at the same time that the ECB declared that it was going to raise interest rates close to the beginning of the first quarter of 2023, it explicitly rejected a scenario of excess demand: "We do not have excess aggregate demand in the eurozone – consumption and the investment are still below pre-crisis levels – and the war is creating a challenge for monetary policy by moderating growth rates and further raising inflation" (ECB, 2022b). At the next meeting, in June, the ECB not only declares a date to officially raise the reference interest rate (July 1) but also announces that it intends to consistently increase the short-term interest rate in subsequent meetings. "We expect to raise key ECB interest rates again in September. (…) beyond September, based on our current assessment, we anticipate that a gradual but sustained path of further interest rate hikes will be appropriate. In line with our commitment to our medium-term target of 2%" (ECB, 2022c). In September, the idea that the contractionary policy would go as far as necessary to meet the target is reinforced, signaling the accelerated pace of rate increases that followed "Ultimately, the interest rate increase will be the necessary to guarantee a sustained return to our target" (ECB, 2022d).

In sum, all strands of the *neoclassical-inspired view* evolved to a convergence on the importance of unanchored expectations as the main risk of propagating inflation in the long term, but they kept differing in the interpretation of what gave rise to this propagation. For proponents of the *Monetarist* and *conditional excess demand views*, the reason for expectations getting unanchored was a positive output gap mainly caused by the action of monetary and fiscal authorities. For the *central banks' view*, unanchored expectations were the result of the unforecastable persistence of temporary shocks (greatly due to the Ukrainian war).

In this new stage, they also converge on the perspective that unanchored expectations are, in this context, a macroeconomic threat to be avoided at all costs, since this mechanism increases not only the level of inflation after the initial shock, but also its pace of evolution through a wage-price spiral. That is, the inflation mechanism is accelerationist, a result directly derived from the neoclassical assumptions regarding

the existence of a supply-determined natural rate of unemployment and its interactions with expectations and bargaining power.

3.1.3.Solutions

Unsurprisingly, the temporal heterogeneity that is observed in the space of mechanisms of propagation has a direct translation in the space of solutions.

From the aftermath of the pandemic until the first quarter of 2022, central banks opposed the idea that increasing interest rates (contractionary monetary policy) and contractionary fiscal policies were required to solve the problem of inflation. Conversely, those aligned with the Monetarist and conditional excess demand interpretations were favorable to contractionary monetary and fiscal policies from the beginning.

Central banks believed that such policies would not only create social harm but also affect the productive capacity of the economy, contributing to a slower solving of the supply constraints that generated inflation in the first place. "If a central bank tightens policy in response to factors that turn out to be temporary (…) such a mistake could be particularly harmful. We know that extended periods of unemployment can mean lasting harm to workers and the productive capacity of the economy" (Powell, 2020).

However, as in the case of the propagation mechanisms, after May of 2022, the neoclassical camp converged to a consensus on the need for a fast increase in interest rates to curb inflation and bring it back to the medium-term target of central banks.

But what is the rationale behind this decision? From this perspective, there are two central mechanisms through which central banks can lower inflation expectations. The first is the one that acts via the immediate effect on aggregate demand and workers' bargaining power: by restricting access to credit, the central bank compresses consumption and investment, causing output to return to a value below its potential level, which means reducing economic activity and increasing unemployment. The second is related to the credibility of the central bank: assuming that agents make their decisions based on expectations about the future and that they will incorporate this change in monetary policy into their expectations, starting to expect lower levels of inflation in the long term, there will be less pressure from the point of view of real wage claims in the present, which may prevent the emergence of an inflationary spiral. As it is worth noting, the first mechanism operates through backward-looking expectations while the last operates through forward-looking expectations. This observation has interesting implications for an in-depth characterization of the heterogeneity of the neoclassical view.

The first thing to notice is that proponents of the *Monetarist* and *conditional excess demand views* place an emphasis on both mechanisms and claim that the operation of the second mechanism cannot occur without the first. This is consistent with their view of excess demand as the root of the inflationary process. Conversely, central banks emphasized the second mechanism, stressing that the goal of increasing interest rate is to anchor expectations to their medium-term target, but without mentioning the need for contractionary effects on output and unemployment, consistent with their view that the source of decoupling primarily comes from the persistence of supply-shocks.

The second interrelated insight to extract from this distinction is the difference that each of the channels represents in terms of the social and economic costs of disinflation. Those who think that the main problem relies on excess demand/overheated labor market are skeptical about the possibility of controlling inflation without employment and output costs. This position became known as *hard-landing*. "The sad truth is that there is no such thing as a slowdown [in economic activity] without a rise in unemployment. The hope of reducing job offers by keeping unemployment constant […] is in vain. Employment opportunities will be reduced; unemployment will rise" (Blanchard et al., 2022). Conversely, those who emphasize the ability of central banks to manage inflation expectations primarily through the credibility-forward-looking expectations channel are more likely to believe that the strategy of contractionary monetary policy can deliver a *soft landing*. That is, a decrease in inflation expectation with low employment and output costs.

In addition to the restrictive monetary policy, the neoclassical camp has also been consensual in defending that the government's fiscal policy must adapt to a new restrictive cycle to contain aggregate demand, helping the central bank's efforts. According to Christine Lagarde, Eurozone governments must "recalibrate" budgetary policy and reduce public spending, as "prolonged budgetary support can delay the effect of monetary policy" (Lagarde, 2023). Social transfers to deal with the effects of inflation on the cost of living must be surgical, parsimonious, and targeted, in the sense of being intended only for the neediest families.

3.2. Critical political economy perspective

3.2.1. The origin of inflation

Authors associated with the critical political economy view reject the idea that inflation always results from generalized excess demand. It is argued that economic activity was still below pre-pandemic levels when inflation started to rise, which indicates that the problems are not primarily on the demand side – especially taking into account that even pre-pandemic values should not be taken as a reference, as they were lower than those of recent decades, after a process of stagnation in aggregate demand in advanced economies.

On an empirical level, the hypothesis is also supported by the fact that the increase in prices preceded the upward trajectory of nominal wages, which prevents the view that the growth of the latter would have been the first cause of the inflationary episode. For this to have happened, nominal wage growth would have had to precede (or at least be contemporaneous with) the rise in inflation.

By contrast, this perspective attributes the origins of inflation to supply-side developments, as inflation is seen as a cost-push process. The cross-sectoral linkages and power relations that exist in capitalist market economies are crucial factors in explaining the origin and spread of inflation. On the one hand, current inflation is associated with initial price increases in sectors that are strategic for the economy – that is, sectors whose produced goods are incorporated in most of the other productive processes and where, for that reason, an increase in prices is reflected in the cost structure of most companies, causing inflation to spread to the economy as a whole. "The inflation of 2021-22 thus began as the result of sector-specific price rises, but because these specific price increases, especially for energy and food, raise production costs for firms and the cost of living for households. (…) overwhelmingly lie in persisting COVID-19-induced disruptions in global supply chains" (Storm, 2022).

Besides, many critical political economists argue that the dimension of inflation surge was greatly influenced by the power of companies – both with regard to the degree of concentration of the sectors in which they operate and concerning the relative power vis-à-vis workers in this specific historical period (Bivens, 2022). It is not possible to understand the contemporary inflation period without having an analytical framework that includes the role of market and class power on sectors that determine *systematically significant prices* (Weber et al, 2022).

Finally, some critical political economists reject the idea that supply-side constraints were a pure exogenous shock associated with the pandemic disruptions. Conversely, it is argued that the vulnerability of supply chains has also a strong endogenous component linked with capitalist globalization and falling profitability (Lapavitsas, 2022).

3.2.2. Propagation mechanisms

Among the authors of this theoretical tradition, inflation is interpreted as temporary. Inflation will persist only as long as the supply shocks that are at their origin subsist. If these shocks vanish, inflation may be higher than normal for a few periods due to existing propagation mechanisms, but it will ultimately fade away over time.

Despite seeing inflation as temporary, they argue that there are channels that contribute to its persistence and amplification during the time in which the shock prevails. Three types of transmission channels can be

distinguished: the *oligopolist channel*, the *financialization channel*, and the *conflictual claims channel*. These channels should be interpreted as complementary, although different authors assign different weights to these mechanisms in their analysis.

The *oligopolistic channel* attributes the persistence of inflation to the result of the interaction of supply shocks with the large concentration of market power in capitalist economies. In fact, this transmission channel holds that the supply-side factors that triggered inflation are also responsible for its persistence.

In this sense, most of what has been said regarding the role of the interaction of market power with the intersectoral structure of the economy is also valid for this mechanism of persistence. Nevertheless, there is one question that is worth clarifying. A common note in several prominent critical political economists is that firms took the general increase in the price level as an opportunity to increase their markups. “Supply shortages resulted, especially given that production of goods had been scaled back sharply across the board during the lockdown. Businesses then took advantage of these supply shortages to mark up prices as much as they could. In particular, energy prices rose by nearly 33 percent and food prices by nearly 11 percent between July 2021 and July 2022” (Pollin, 2022).

But then, the question emerges: why do firms that enjoyed this immense market power for decades, precisely decide to use it at this particular moment to increase their markups?

The first potential answer concerns the effects of inflation in facilitating collusion. It is widely known that firms in oligopolist markets use strategies of collusion that enables market coordination. These strategies are often not explicit. Probably the most used mechanism of coordination is implicit and takes the form of price signaling from other competing firms. Periods of moderate inflation make that implicit coordination mechanism more effective since prices change more frequently and noticeably. This could have been particularly important, especially during a long period of near-zero inflation in most developed economies.

Nevertheless, the most convincing answer comes from the effects of inflation on the reaction of consumers to price changes. In a period of very low inflation, any price change is very noticeable and received by consumers with great resistance. On the contrary, in a period of increasing inflation, as the post-pandemic one, prices are constantly being revised. Consumers are already expecting price increases when they go to the stores. That severely diminishes the resistance of consumers to price adjustments made by firms. Under this conjuncture, firms can make price adjustments that would otherwise be faced with resistance from consumers. In practice, this means that a period of inflation can make consumers’ price elasticity of demand more rigid, and firms take advantage of that fact. This argument is illustrated by Singer (2022): “Today, when a consumer goes into a restaurant, say a steakhouse, and she sees a $50 price, she’s already been conditioned to expect that the price was going to be higher. She’s more likely to go along, to just tolerate

the price hikes. She doesn't see it as evil, just something that everyone's doing. This is another reason we don't see people just defecting and imposing price discipline" (Singer, 2022).

Regarding the influence of the oligopolist channel, it is pertinent the contrast between critical political economy and central banks' views. The last associates the rise in prices in the retail and energy sectors with a temporary adjustment of mark-ups, resulting from a rational decision of these economic agents to the new market conditions they face. There is neither a reference to the institutional context in which they operate nor a discussion of the normative dimension of the current market power enjoyed by contemporary oligopolist firms. On the contrary, the critical political economy tradition analyzes market power in these sectors in the context of a historical and political discussion on the trend toward concentration of market power in capitalist economies. In other words, the current institutional context is critically assessed, and it is not viewed as immutable. Instead of the increase in profit margins being the result of a rational decision within a framework that is not subject to problematization, the increase in profit margins is here viewed through the lens of a power relation within capitalism that can and should be changed.

The *financialization channel*, on the other hand, underlines the preponderance of financial derivatives in the pricing of commodities, such as food, gas, and oil, and their relevance in amplifying the inflationary process. The association between geopolitical uncertainty and highly financialized markets caused the price of these goods to rise far beyond what would be determined by fundamentals associated with supply and demand (Ghosh, 2022, 2023). In this respect, it is stressed the action of hedge funds and OTC operations in amplifying the price of commodities, especially taking advantage of the uncertainty created by the Ukrainian War. "These dramatic price movements were not triggered by changes in real output and demand. Blaming big commodity-price spikes on supply shortages caused by Russia's war in Ukraine does not capture the full truth. (…) Frantic speculative activity, mainly by financial companies like hedge funds that dominate trading, has made matters much worse" (Ghosh, 2022).

Finally, the *conflictual claims channel* stresses that understanding the persistence of inflation centrally depends on studying the channel through which the supply shock affects the bargaining positions of workers and capitalists in the production process. That is, even if the shock that triggered the inflationary process originated in the intersection of factors such as the constraints in the global value chains during the pandemic shock, the increase in energy costs, the oligopolistic characteristics and the increasing financialization of the sectors where prices rose faster, those facts are not sufficient to understand its subsequent dynamics. These factors can explain the increase in the price level (the level effect) but cannot explain the persistence and acceleration of inflation (the growth effect) (Vernengo, 2022).

To understand the persistence of inflation, it is necessary to understand how the initial price increase triggers a conflict over the income shares of capitalists and workers in the production process. It is this dispute between capitalists and workers that justifies the perpetuation of the inflationary scenario, not simply a one-time shock in the price level followed by an inflationary path that returns to the equilibrium position. "In this view, whether inflation accelerates or not will depend not only on the source and size of the shock, whether it has been a demand or a supply shock, and how these can be tackled, but, more importantly, on the social and institutional conditions related to the class conflict" (Vernengo, 2022).

Importantly, the three channels are *complementary and not mutually excludable.* While it is true that some debate erupted between the proponents of the oligopolist channel and the conflictual claims channel, the positions have been converging to a synthesis that can accommodate the importance of both dimensions. An example of that movement is Weber and Wasner (2023), who argue for a chain of events with three stages: a first stage in which the increase in commodity prices leads to a first round of price increases in systematic significant sectors and windfall profits; in the second stage, these higher prices are incorporated by other sectors as intermediate costs. Finally, these increased prices will generate an increase in wage claims from workers who aim to reestablish their bargaining positions. A similar argument is presented by Wildauer et al. (2023), based on a three-sector model (energy sector, final goods sector and services sector) calibrated using US sectoral data.

Likely, the most clarifying form of presenting the conflictual claims channel in this perspective is through a contrast to the NAIRU-based theory advocated by the proponents of the *excess demand* and *central bank views*.

For the NAIRU-based theory, wages are the cause and/or a propagation mechanism with accelerationist characteristics for inflation. The propagation mechanism is triggered because unemployment is below the natural rate of unemployment, which makes the workers' expected real wages inconsistent with stable inflation. The increase in expected real wages can occur due to an increase in the bargaining power of workers and/or due to the incorporation of the new inflation rate in the expectations of workers as a result of the persistency of inflation (the difference between the two is a major distinction between the excess demand and the central bank views). Regardless of the case, inflation is ultimately the responsibility of workers who are not being "reasonable" and are asking for a share of value-added inconsistent with stable inflation.

Critical political economists contest this view on numerous planes. Firstly, the *increase in nominal wages is not the cause of inflation, but rather its consequence*. Workers are not targeting a higher real wage; they are just trying to keep their former real wage. However, because the bargaining power of workers was

severely damaged during the neoliberal era, they were unable to have enough power to keep their target wage rates. This explains the weak reaction of nominal wages and the fall of real wage rates in most countries.

Critical political economists are also clear in declaring that an accelerationist view of inflation based on a wage-price spiral is inconsistent with the present inflationary moment. That event may certainly occur in a market capitalist economy, but when the cause of the inflationary event is an increase in the workers' bargaining position, in the sequence of a situation of full employment and/or strong pro-labor legislation. In such a case, inflation is one of the possible strategies of capital to restore the labor discipline required for the wage-labor system. However contemporary inflation is characterized by the opposite set of events. "Labour has been very slow to redress that widening gap between prices and wages by demanding higher wage increases that have significantly lagged behind price increases." (Seccaraccia, 2022, 1). There is no reasonable channel that would lead to an upward review of the targeted real wage of workers. Parallels with the 1970s are misplaced: "(…) Today's economy is very different from the economy of the 1970s. It would be the height of foolishness to graft 1970s solutions onto the problems facing us in 2022. The economy is very different: globalization is more far-reaching and unions are significantly weaker" (Stiglitz and Baker, 2022).

The brief disarray in critical political economy headquarters

Although it is likely not contentious to claim that it has now converged into a synthesis, there was a brief but intense debate within critical political economy between the proponents of the *oligopolistic* and *conflictual claims channels* in an earlier stage of the debate. The disagreement revolved around the relevance of the oligopolistic channel and the definition of what is exactly meant by profit-led inflation.

The most intensive phase of the debate can be considered to have started in May 2023, when Marc Lavoie wrote a post in the Monetary Blog (Lavoie, 2023a). In that post, he criticized the centrality attributed to the concept of profit-led inflation to explain post-pandemic inflation, as argued in influential contributions for the critical political economy narrative, such as Storm (2022) and Weber and Wasner (2023). According to Lavoie (2023a, 2023b), these authors make their diagnosis based on the observation that profit shares increased significantly after the pandemic, but such observation should not be enough to classify inflation as profit led. In his view, this classification must be restricted to a context in which capital actively intends to increase its markup in the pricing process, because the profit share can increase even when firms do not try to increase their markups. This may happen because (i) companies operate with overhead labor. Therefore, expansion phases of the economic cycle are associated with increases in profit share that result only from the decrease in the proportion of overhead labor in the total workforce; (ii) because of cost-plus

pricing strategies. If the company establishes a markup on the sum of unit labor costs and unit material costs, an increase in the relative weight of the seconds leads to an increase in profit share, even with a constant markup. In this case, Lavoie argues, the term profit-led inflation becomes misleading.

Nikiforos and Groethe (2023) challenged Lavoie's arguments. They counter-argued that the main developed economies were already above their pre-trend levels and that profit shares were still higher than normal. Therefore, the concern with the cyclical component of the profit-share was formally correct but did not apply to the present economic moment. Secondly, they presented several studies pointing to evidence of increasing markups in the last years, in the defense of the relevance of the oligopolistic channel. Finally, they defend the concept of profit-led inflation, even for the case in which the initial price increase is not the result of an increase in firms' markups, since we observe a scenario in which firms can impose an increase in prices to protect their margins, imposing mostly of the initial distributional burden in real wages (a scenario of price-wage inflation, in the terminology of Wildauer et al. (2023)).

In the last interaction, Lavoie (2023c) assumes a conciliatory tone and recognizes that, in some sectors, there may have been increases in markups and some relevance of the oligopolistic channel but insists that an increase in profit shares is not a convincing proof of the relevance of that channel. He asserts that is in agreement with the relevance of the price-wage inflation described by Weber and Wasner (2023) and Nikiforos and Groethe (2023) but maintains that he prefers labeling it as conflicting claims inflation triggered by a negative supply shock, without assigning a determinant role to increasing profit claims in the mechanism of propagation (echoing the position taken by Vernengo (2022) in an earlier stage of the debate). In sum, there is agreement on the relevance of the process of conflictual claims for contemporary inflation in which profits were initially able to win over labor and agree that in that process some firms may have been able to increase their markups. The disagreement is strictly placed on the use of the concept of profit-led inflation to define that process and on the intensity of the oligopolist channel.

3.2.4. Solutions

For critical political economy authors, post-pandemic inflation is not a macroeconomic problem in itself, since the conditions for an accelerationist inflation pattern that could threaten stability and economic growth are not present in the post-pandemic scenario. Therefore, the focus of the answers advocated by critical political economy is not on curbing inflation at any cost, but rather on proposing a set of policies and reforms that simultaneously favor fairer outcomes and ease the persistence of inflation. Achieving these goals implies the adoption of:

i) Strategic margin and/or price controls and taxation of extraordinary profits

The debate on price controls achieved high prominence (and controversy) since the very early stages of the debate. The first impulse came from a widely shared and discussed article by Isabella Weber in *The Guardian* (Weber, 2021), in which it was shown the existence of several successful historical examples of price controls to address temporary supply-side constraints, including in the US during and after World War II. A point emphatically underlined by this literature is that price-control policies are much more complex and varied than the simple administrative definition of prices, a simplification often made by its detractors: "(…) price stabilization policies can take various forms, from legislation that prevents speculative price increases, automatic taxation of windfall profits to systemically significant costs that come into force in periods of crisis, up to the definition of limits for strategic prices. Financial regulation against speculation can also play an important role" (Weber et al., 2022).

Price control policies can be designed for specific sectors, namely those where inflation was initially concentrated and which had repercussions on the cost structure of most other sectors, such as energy. This type of policy assumes that the increase in prices seen in some sectors does not only reflect the scarcity of supply in the face of directed demand but also the market power of companies when setting prices. They should not be seen as the definitive solution to inflation, but rather as a mechanism that makes it possible to stop its evolution and "buy time" to act on the constraints in the supply of raw materials that were at the origin of the generalized rise in prices. The successful implementation of these policies implies the existence of efficient planning authorities with updated information on the current state of the economy. Since the neoliberal era was characterized by the dismantling of the planning capabilities of most states through externalization (Mazzucato and Collington, 2023), rebuilding these capabilities should be a primary objective to ensure more robust responses to future capitalist crises.

A recent comparative assessment of different solutions to address post-pandemic inflation makes a compelling argument for the adoption of windfall profits. Wildauer et al. (2023) compare three different policy responses to inflation (wage repression, contractionary fiscal and monetary policies and a windfall tax followed by the distribution of profits), finding that the last is "(…) the most effective in reducing inflation without reinforcing reductions in employment and labor shares" (Wildauer et. al, 2023).

ii) Reform of the international financial and monetary system

There are at least three types of reforms to the international financial and monetary system that have been advocated to allow for a more effective fight against current inflation.

The first concerns *reforms in the international financial commodity markets*. Ghosh (2022) argues that i) transactions must take place in regulated markets where rules are established to prevent speculative operations - such as a limit to the number of short-term transactions that participants can conclude; ii) derivative products should only be able to be traded by agents that have direct operational interests in the respective raw materials. Ensuring these conditions would prevent increases in prices of raw materials that are primarily related to speculative activity in financial markets in periods of uncertainty. That would curb the increase in firms' costs and, therefore, contribute to lower propagation of inflation.

The second concerns the *reform of the international monetary system*. The current post-Bretton Woods era has been marked by systemic instability due to the absence of institutions responsible for counteracting the accumulation of macroeconomic imbalances between countries. The US dollar continued to function as an international reserve currency, meaning that developing countries are often forced to borrow in dollars to finance their development efforts. This makes them vulnerable to rapid changes in monetary conditions arbitrarily defined by the implicit hegemon of the international monetary system (the US), especially in the context of free capital flows (Eichengreen, 2019). On those occasions, developing countries often face spiking debt services and sudden-stop crises, which often compromise their catching-up efforts. Therefore, it is a priority to define an international monetary system in which decisions are more coordinated among countries and in which the burden of adjustment is more balanced between developed and developing countries (Ocampo, 2017). In the absence of such reform, individual countries must take measures that better protect them against sudden changes in monetary conditions, namely the increase in interest rates in core developed countries. That may imply regulating capital inflows and outflows to avoid cycles of appreciation and depreciation of their currencies and selecting the type of foreign investment that can contribute to socially useful goals (Ghosh, 2023).

The third consists of *reforming the nature, democratic scrutiny, and goals of central banks*. The independence of these institutions from democratic power must be called into question. The current inflation-targeting nature of independent central banks determines a response to inflation that disproportionally impacts the working class. Extending the scope of targets of central banks to include development, environmental and social goals is seen as a central step towards better forms of addressing inflation in the future (Epstein, 2019, ch. 15, 16, 17).

iii) Rebuilding State planning capabilities, accelerating green transition and promoting reindustrialization

According to critical political economy authors, the pandemic revealed the supply-side vulnerabilities of globalized capitalism. What many considered to be a robust economic setting, ended up showing to be fragile to shocks in particular segments of global value chains. At least two sources of vulnerability became

evident: the enduring reliance of global production on a set of commodities, many of them with a fossil origin; and the excessive atomization of the production process worldwide, making a disruption in any global region easily transmitted across supply-chains. To overcome these vulnerabilities in the long run and diminish the likelihood of inflation surges in the future, two strategic paths must be taken: firstly, accelerating the pace of Green Transition. This requires rebuilding the planning and industrial capacity of states. State-led investments in green energy and planning coordination with the private sector are fundamental – a true *Green New Deal* (Pollin, 2015). The mere implementation of financial incentives and subsidies to the private sector are insufficient and harmful (Gabor, 2021). Second, and complimentarily, rebuilding industrial capacity in developed countries permits to increase the robustness of regional supply chains along with an ecosystem of production and innovation centered in green technological sectors. The importance of this strategy has been recognized, especially in the US, with the Infrastructure Investment and Jobs Act (2021) and the Inflation Reduction Act (2022).

The Euro Zone has shown intention of following similar lines, but the existing fiscal rules and their asymmetric effects on different member countries severely compromise a coordinated strategy. Therefore, for these programs to be successful Europe must abandon budgetary rules that restrict public investment, especially in the most indebted peripheral countries. Febrero and Uxó (2023) underline that European countries must avoid a return to pro-cyclical fiscal policies and "take an alternative decision that could provide a substantial push to the green investment programs that Europe needs: "convert in perpetual debt – or cancel – the public debt acquired [by the ECB], relieving the pressure on the States with regard to its refinancing" (Febrero and Uxó, 2023).

iv) Supporting wage growth to overcome the cost-of-living crisis and promote a fairer approach to the inflation period

For neoclassical authors, advocating in favor of wage increases in a period of inflation is doomed to be considered sophistry. That is explained by the fact that – as already detailed before – the propagation mechanism in the neoclassical scheme is placed on excessive nominal wage growth. Promoting wage growth would only amplify the propagation of inflation. Besides, these measures would be self-defeating, because the progress of nominal wages would be followed by an increase in inflation that would leave real changes unchanged.

Conversely, the critical political economy perspective considers that the response to inflation should include a promotion of wage growth that – along with other measures, such as price controls – should contribute to a fairer reaction to inflation. A sustained strategy of wage appreciation is essential so that the inflationary

shock (which does not constitute a moment of crisis in itself) is not transformed into a crisis in the cost of living (Lapavitsas et al., 2023).

3.2.3. The fundamentals to oppose contractionary monetary policy

Since mid-2022, contractionary monetary policy has become the principal response to inflation worldwide. Unsurprisingly, that was the result of the convergence of all the neoclassical camps on the need for a quick and intense increase in interest rates to curb inflation. Given the hegemony that this view acquired in academic and public debates, authors placed in the critical political economy tradition have devoted a substantial part of their participation in the debate to debunking the proposition that increasing interest rates is the best strategy for dealing with contemporary inflation.

According to these authors, this strategy is supported by fragile theoretical and empirical propositions and has several harmful and unnecessary economic and social effects. Throughout this section, we review the fragilities of these propositions. In the end, it is shown that these fragilities are closely related to the conceptual and operational problems of independent central banks.

i) There is not a strong empirical association between low inflation regimes and higher growth rates.

One of the most common justifications for privileging an economic policy that elects fighting inflation through monetary policy as its central goal (even if with strong detrimental effects on other economic and social dimensions) is that there is a long-standing positive relation between low inflation regimes (close to the 2% target) and economic growth and stability.

Nevertheless, there is no robust empirical evidence that points in this direction. Many empirical studies find inflation thresholds above which inflation is detrimental to growth, but they are substantially above the two percent target set by most central banks. Some authors suggest the opposite: countries that have inflation rates between zero and two percent have historically had lower growth rates. According to the influential study of Bruno and Easterly (1996), the inflation rate only started to have some meaningful negative historical impact on growth beyond a threshold of twenty percent. Using non-linear econometric techniques, Pollin and Zhu (2006) report a similar threshold, lying between fifteen and eighteen percent. This result was confirmed in a recent study by Pollin and Bouazza (2022), already published in the present debate, using updated data. They also report that economies are more likely to achieve higher growth rates when they report inflation rates between 2.5 and 15 percent in comparison with the 0-2% range. Therefore, they conclude that "(…) with the high-income economies, the evidence suggests that they are paying a

significant penalty in terms of foregone GDP growth when policymakers set an inflation target at 2 percent as the central goal of macroeconomic policy" (Pollin and Bouazza, 2022).

ii) Contractionary monetary policy cannot intervene in the causes of inflation and has high potential long-term costs.

A central part of the opposition of critical political economists to the sharply recessive policy pursued by central banks is that it is an ineffective way of dealing with contemporary inflation. Inflation has its roots in very specific sectors of the economy, with a great impact on the general price level, due to its relevance to the cost structure of most industries. This shock came about due to supply-side disruptions and rising trade margins. By contrast, for most economies, there is no evidence that the size of demand has played an important role. Raising interest rates will not solve any of those underlying problems. "(…) the sources of the sector-specific price changes overwhelmingly lie in persisting COVID-19-induced disruptions in the global supply chain and an escalating geopolitical crisis. It follows that, deep down, most of today's inflation is coming from sources that interest rate hikes will do relatively little to control" (Storm, 2022). As Louis-Phillipe Rochon observed: "[T]he entire building of dominant policy is based on the impact on demand and therefore on prices. But what if inflation is not driven by demand? (…). There are problems that depend more on international conditions, over which national central banks have no control. Therefore, all these interest rate increases will not solve the inflation problem anytime soon in 2022". (Rochon, 2022b).

This does not mean that critical political economists do not believe that increasing interest rates may decrease inflation. However, such goal only through a collapse in demand, at enormous costs to economic growth and inequality. Surprisingly, these costs are largely absent from the public debate. Even when recognized, they are considered a necessary evil to contain inflation. The destructive politics that such an attitude represents is recognized by many economic analysts, even among those who tend to be closer to the neoclassical-inspired positions. Robin Wiggles, editor at the Financial Times, wonders: "If monetary policy has a limited impact on these systemically significant inflation drivers, should central banks overcompensate, raise rates aggressively and destroy demand to drive down all other prices – regardless of the economic cost? (Wigglesworth, 2022).

Central bankers are considered to be consciously silent about these short and long-run costs. Referring to Jerome Powell, Joseph Stiglitz wrote: "he blithely calls for these increases in unemployment (falsely claiming they are necessary to bring down the rate of inflation) without any appeal for assistance, or even a mention of the long-term costs. (...) [is a] totally unnecessary defense of pain" (Stiglitz, 2023). "Increases

in interest rates, beyond normalizing levels, will do little to address the underlying problems and may exacerbate them, impeding effective responses to supply shortages" (Stiglitz and Regmi, 2023).

As Stiglitz adds, the operation of central banks is based on the assumption of events that are simply not happening. They are "bogeymen" that are nowhere to be found, as he ironically describes them: "To [it] justify itself, (…) the FED points to the usual bogeymen: runaway inflation, a spiral of prices and wages and expectations of unanchored inflation. But where are these bogeymen? Not only is inflation falling, but wages are rising more slowly than prices (meaning no spiral), and expectations remain in check. The five-year forward expectancy rate is hovering just above 2% – hardly without an anchor" (Stiglitz, 2023).

Phillips curve models based exclusively on prospective expectations (essential for the idea of disinflation with low economic costs) find little empirical validity in the literature. (Fuhrer, 1997; Aidar, 2012). This scarcity of empirical validity is seen as unsurprising, since, in its canonical form, the forecasts generated by the Phillips curve with forward expectations are uncorrelated with past inflation and supply shocks. It is the interaction expectations/credibility of the monetary authority that assumes all the explanatory power (Gordon, 2009). To increase their empirical soundness, it is often necessary to estimate hybrid models, with adaptive and prospective expectations (Clarida et al, 1999). But, within this framework, the idea of disinflation without the need for a contraction in output and employment fades away.

Given their long-standing position that demand has both short and long-term levels and growth effects, post-Keynesians are particularly vocal against the potential long-term detrimental effects of contractionary monetary policy. These claims are supported by a body of research comprising theoretical and empirical models that consistently pointed to long-run relationships between aggregate demand shocks and real output growth. (Lavoie, 2022;; Hein, 2023; Skott, 2023; Girardi et al, 2019). Demand-induced capital accumulation and demand-induced technological change are central long-run transmission mechanisms that characterize most of those models.

Interestingly, the last decade was also characterized by a surge of empirical macroeconomic research conducted by neoclassical authors exploring and identifying long-run effects of monetary policy on real output (Blanchard et al. 2015; Jordà et al, 2023). The long-run neutrality of money (a historic cornerstone of neoclassical economics for a long time) was being challenged from within by the time the pandemic occurred. Therefore, it becomes particularly hard to understand how the neoclassical camp tends to downplay the economic costs of the steep rise of interest rates so easily.

Moreover, these effects are more harmful and counterproductive in a historical moment characterized by the urgency of facing the climate crisis, which requires a high level of public and private investments to

build the necessary infrastructures for the transition to green energy sources (Dafermos et al., 2018; Kedward et al. 2022; Dafermos, 2023).

iii) The excess demand view relies on foundations characterized by empirical fragility and theoretical narrowness.

The hegemonic view of inflation as a macroeconomic event spurred by excess demand is closely tied to the NAIRU theory. In one sentence, it can be synthesized as the idea that, at each point in time, there is only one supply-determined/demand-invariant level of unemployment that makes the profit and wage claims consistent with stable inflation. Events of excess demand bring unemployment below the NAIRU level and trigger accelerationist inflation, because the bargaining power of workers is excessive relative to market conditions (markups are often taken as the result of market structure). There are at least two central caveats to this story.

The first concerns its lack of empirical support. The concept of a supply-determined NAIRU has been empirically challenged on two fronts. On the one hand, there is no evidence that the rate of unemployment solely responds to supply variables in the long run. Using a wide range of techniques and samples, several authors have found that actual unemployment rates respond to aggregate demand components in the long run (Stockhammer, 2004; 2008; Martins and Damásio, 2019). On the other hand, it has also been found that the NAIRU estimates published by institutions such as the OECD or the European Commission also have a significant statistical relation with demand components (Heimberger et al. 2017). This means that these estimates are not structural (in the sense of being only supply-determined) and demand is, actually, able to push unemployment below those levels without creating inflationary pressures. That creates an obvious bias in the estimation of output gaps, making assessments of scenarios of excess demand often distorted.

The second caveat concerns the theoretical assumptions about the bargaining positions in the labor market. The NAIRU story almost always implies that "excessive" bargaining power causing inflation has its origin on the workers' side, while the markup reflects a power-free and cycle-invariant magnitude that depends on exogenously given market structures. In other words, even if markups represent deviations from the rate of return to capital relative to competitive equilibrium, their reduction cannot/should not be a policy target to manage inflation. Managing the evolution of unit labor costs by disciplining workers is the only form of achieving a stable inflation target.

This perspective can be intellectually challenged by referring to very different and apparently unconnected segments of literature.

The first concerns theoretical and empirical work by classical authors in critical political economy. While the center of Marx's analysis and project was never the possibility of workers achieving better economic conditions under capitalism, he was an advocate of the political work of social-democratic and trade unions which tried to push for better working conditions. In *Value, Price and Profit* (Marx, 1910), Marx elaborates on the outcomes of empowering workers under capitalism. He stresses two main points: i) inflation is rarely to be attributed to wages. External factors such as the price of commodities are the most common causes of inflation; ii) it is not true that pushing for higher wages will create a proportional change in prices. Stronger labor bargaining power can, in fact, reduce the profit margins of the capitalist class. Kalecki (1954) would later provide seminal time series evidence that the degree of monopoly fluctuates along business cycles, suggesting that periods of low unemployment and stronger labor bargaining power are indeed able to exert a downward pressure on markups.

The second relates to the emerging literature on empirical labor economics on the relevance of monopsony power (Manning, 2021). This literature stresses not only that present capitalist economies are overall featured by rates of return on capital above the competitive equilibrium due to factors such as market concentration, but also (decisively) that these outcomes can be changed through an economic policy that empowers the bargaining position of workers, such as the increase in unionization or full employment-friendly policies. In the context of the present debate, prominent authors of this literature argued that the US was not experiencing overheating in the labor market, but that the labor market was actually closer to the competitive equilibrium, inverting a long-term trend in subdued bargaining power for low-wage workers in the US economy (Autor et al. 2022). Low-wage workers were able to achieve real wage gains despite the higher inflation rates. Therefore, the perspective that pushing for full-employment policies in a period of inflation is self-destructive (accelerating inflation without achieving real wage gains) does not hold.

iv) The Quantitative Theory of Money does not hold

A direct causal relationship running from the growth of monetary aggregates to the rate of growth of the price level (a central argument in the monetarist view) has consistently failed to emerge in the data. One comprehensive and influential analysis in this domain is De Grauwe and Polan (2005), who analyzed the long-term relationship between money growth and inflation (over a 30-year period) for about 100 countries and concluded that, except for countries with hyperinflation, there is no significant long-term relationship.

On the theoretical ground, critical political economists (particularly post-Keynesians) have long argued that the quantitative theory of money has the central flaw of assuming the exogeneity of money. On the contrary, they argue that money evolves endogenously with economic activity and the price level but does not

determine them. (See Kaldor, 1985 or Moore, 1979, for seminal critiques of Monetarist theory). Even if positive correlations emerge between money and the price level that does not provides evidence for the causality implied in the Monetarist thesis.

iii) Contractionary monetary policy has a class bias and amplifies inequality

Contractionary monetary policy is neither social nor political neutral. Adjusting interest rates as a tool of macroeconomic management has distributional impacts that have been for long researched by critical economists. One can envision at least three channels through which raising interest rates may create a structural tendency for increasing inequality.

The first concerns its effect on workers' bargaining power. James K. Galbraith was among the first to point this out in this debate. In January of 2022, shortly after the FED signaling its intention to increase interest rates, he signed an article in the *Project Syndicate* with the striking title: "The Fed's Target Is Workers" (Galbraith, 2022). Decreasing future nominal wage growth is an essential objective of the strategy of contracting aggregate demand through a recessive monetary policy. This tends to lead to an increase in functional income inequality (between capital and productive labor), especially in sectors with high market power, where capitalists are less likely to reflect the deceleration of nominal wages in the deceleration of final prices. This channel becomes particularly intense when inflation is being driven by higher intermediate costs and/or higher commercial margins in specific sectors. Promoting a strategy aimed at reducing wages is precisely deciding to attack the only component of the cost structure of companies that were not at the origin of the inflationary moment. As Matias Vernengo summarizes, "in reality, what matters [in this strategy] is the containment of workers' demands and the mitigation of the distributive conflict" (Vernengo, 2022). It is *monetary austerity*, in the words of David Fields, that "like fiscal austerity, is a top-down offensive (...) A monetary attack on workers (…) being waged in the name of combating inflation" (Fields, 2023).

The second channel operates through the impact of recessive monetary policy on rentier capital returns. The increase in interest rates implies an increase in the real income of rentiers, that is, those who live on interest and/or rents that result from the control of relatively scarce resources. This creates a trend to increase the share of rentier capitalists, relative to industrial capitalists and workers. Since rentiers are mostly composed of individuals who are already at the top of the income structure, this movement tends to increase global economic inequality.

Finally, the third channel operates through the unequal distribution of unemployment across income groups. Workers at the bottom of the wage structure (on the periphery of the labor market, often with more

precarious jobs) tend to be relatively more affected by cyclical unemployment, which turns the strategy of creating recession and unemployment to fight inflation into a necessarily regressive strategy.

The empirical evidence regarding the effects of inequality follows these theoretical assumptions. Already in the course of this debate, Medlin and Epstein (2022) published a study, using data from the US economy and counterfactuals for the monetary policy followed by the Fed in 2021-2022, which concludes that "this policy [raising interest rates] serves as a real net wealth protection policy for the 1% by restoring some of the lost wealth they would otherwise lose due to unexpected inflation" (Medlin and Epstein, 2022).

This discussion has close ties with the more general critical research on independent and inflation-targeting central banks. Since the late 90's, the New Consensus Macroeconomics has tried to stress that having an independent central bank primarily focused on inflation would be a more efficient and socially neutral (because technically driven) form of stabilizing capitalist economies (Arestis, 2009). Critical political economists have consistently shown that this logic is flawed. First, in the contested terrain that always characterizes a capitalist economy, there is no such thing as a neutral form of stabilization. Independence in the context of conflicting interests is always an illusion. Price stability as a central objective makes an implicit class choice: "In a democratic society, there is no political independence. All institutions are political in nature and need political constituents to protect their authority and prerogatives" (Epstein, 2016). Price stability is not achieved because of some *magical* institutional property, but rather because inflation-targeting regimes favor continuously depressed demand regimes and labor shares (Rochon and Rossi, 2006; Taylor and Barbosa-Filho, 2021), with the rentier class being the one that most benefited from this central bank regime (Epstein and Jayadev, 2005).

Inflation targeting is intrinsically biased against the working class: "The true nature of a monetary policy based on inflation targeting is a long-term yield policy. The whole structure of inflation targeting earnings policy is highly problematic, as the policy is inherently biased against labor's share of income". (Rochon and Seccareccia, 2023).

iv) Counterproductive effects on domestic macroeconomic stability

The ultimate intended effect of contractionary monetary policy is decreasing business costs by compressing the growth rate of nominal wages. However, as this effect is indirect, it only works with a time lag. On the other hand, the increase in interest rates represents an immediate increase in the costs of companies, especially in economies where company financing is mainly obtained through bank credit. This can add to internal macroeconomic destabilization and even to a short-term reinforcement of inflationary pressure. (Hein and Stockhammer, 2010).

The macroeconomic destabilizing effects can also have roots in the indebtedness of households, especially in countries in which loans are mostly granted with variable interest rates, making the debt services of these credits very vulnerable to monetary policy shifts. The rise in interest rates may lead to an increase in defaults with non-negligible macroeconomic effects. “This concern is magnified by the fact that, contrary to what happened in the early 1980s, these poor households now also tend to be heavily indebted in relation to their disposable personal income and may face an even greater risk of insolvency, either due to the increase in interest rates, or due to rising unemployment” (Seccaracia, 2022)

v) Shrinkage of the policy space for peripheral countries and consequent accentuation of the divergence between center and periphery

For the central banks of economies that are at the top of the international monetary hierarchy, the decision to change interest rates is, to a large extent, a discretionary decision, which depends on their judgment and the balance between policy objectives and domestic macroeconomic conditions. However, for the central banks of countries that are in lower positions in the international monetary hierarchy, this policy decision space is much more restricted. In an international economy increasingly characterized by the absence of regulation in capital flow, these central banks feel pressured to follow the rise in interest rates dictated by the central banks of the central countries, even those that consider this to be inappropriate for the context of their economies. Many of these countries are still facing major scenarios of recession and unemployment, largely because they have not been able to finance projects to mitigate the effects of the pandemic like the countries in the center. Thus, the rise in ECB and FED interest rates will be particularly negative for unemployment and economic growth in these countries, introducing an additional recessive shock in a context that is already one of great economic weakness.

Rising interest rates will bring shock waves to these countries through their external financing stance. Most peripheral countries are compelled to contract dollar-denominated or euro-denominated debt. The consequent rise in reference interest rates in these economic areas will have the predictable effect of a pronounced rise in the external debt services of these countries.

The extent to which central banks of developing countries can resist following the actions of central banks in developed countries is open to debate. Most of the opinions appear to converge on the idea that space is very limited unless countries are willing to reinforce strong macroeconomic management of their capital accounts. Ultimately, this follows from the perspective that the contemporary international monetary setting is featured as a dilemma (not a trilemma) (Rey, 2015). When countries choose free capital flows, exchange rate and interest rate policy become subordinated to the task of stabilizing financial flows. Reflecting on the Turkish case, Orhangazi and Yeldan (2023) negatively assess the strategy of the Turkish government in

keeping interest rates low. They argue that this strategy culminated in larger macroeconomic imbalances and lower real wages. The authors make the point that without being willing to change the rules of international integration there is nothing "heterodox" in following those policies. Ultimately, these policies are followed by new rounds of austerity. In their words, it is just a "new chapter neoliberal peripheral development". In the same tone, Caldentey and Vernengo (2023) observe that for developing countries the negative effects of raising interest rates on variables such as growth and employment may be less significant when compared to the negative effects of depreciation associated with the decision to keep interest rates constant. In other words, contractionary monetary policy can be considered a necessary evil. "While in the center there is a danger in accepting an exaggerated estimation of the social evils of moderate inflation, in the periphery the risk is to exaggerate the evils of higher interest rates and more stable and appreciated exchange rates. The higher levels of inflation, not only have a significant distributive impact, but also might have a larger effect on relative prices and on accumulation." (Vernengo and Caldentey, 2023).

However, it must be emphasized that the possible need to raise interest rates in peripheral countries is always regarded as second best, resulting from a bad decision in central countries associated with an asymmetry of power in the international monetary system: *if central banks in core developed countries did not take this decision in the first place and/or there was an international monetary order that left peripheral countries less dependent on the decisions of central countries, this increase in interest rates would not be necessary*.

vi) Financial instability

The connection between finance, states and central banks was characterized by significant transformations during the decade that preceded the pandemic. Central banks in developed countries extensively used non-conventional policies to try to invert the stagnant trend in developed economies. This mainly took the form of state de-risking of private investments, with central banks extensively buying private assets in secondary markets (Gabor, 2021). One of the problems of this action is that it significantly increased financial fragility. When inflation exceeded the target of central banks, this regime faced a fundamental contradiction: central banks cannot continue to inject large amounts of funds into financial markets and, simultaneously, press for a contraction of liquidity by raising interest rates. The post-pandemic moment of inflation corresponds to a crisis in this regime. This poses an enigma to the rentier class and central banks: "Condemned to contraction, finance must choose between apoplexy - a crash - or a slow decrepitude, under the effect of rising prices. The period ahead may therefore be one of a long, slow-motion financial crisis" (Durand, 2023). For Durand, central banks are desperately trying to secure the second option, in an attempt to cautiously square the circle: while raising interest rates to contract demand and liquidity, they effectively intervene or promise to intervene whenever there are signs of financial stress. This is what happened in the

case of the SVB collapse, where there was a discrete bailout, namely by valuing US bonds at face value instead of their current market value, an extraordinary price guarantee. Another example is the creation by the ECB of the opaque Anti-Fragmentation Mechanism, conceived as a response to signs of financial stress in the sovereign debt markets of the Euro Zone countries (ECB, 2022). ECB is promising to inject large amounts of liquidity into secondary sovereign debt markets if needed, while steeply raising the interest rate, an apparent contradiction.

So far, it appears that central banks' attempt to manage a "slow-motion financial crisis", where hot spots are surgically defused through their swift action, is succeeding. But there are no guarantees that this strategy will continue to work. The fundamental contradiction between contractionary monetary policy and the promise to guarantee liquidity when needed remains present. This is a very risky and potentially unstable balance. At any time, the objectives of price stability through interest rate policy and financial sector stability may become incompatible.

Conclusion

This article conducted a structured review of the post-pandemic inflation debate. It intended to contribute to a more intelligible academic and public discussion on a topic that has recently witnessed multiple contributions from academics from all sides of the economics profession and has been omnipresent in the public sphere. Its contribution opens the door to extract three direct conclusions and a final remark based upon them.

Firstly, *the debate is deeply informed by the theoretical differences in the schools of macroeconomic thought*. In fact, the most meaningful form of making sense of this debate is tracing back the different proposals to the theoretical foundations of the schools of thought to which their proponents belong. This is valid to distinguish between the two main different views in the debate, but also to understand the differentiation among each subcategory. For instance, the excess demand interpretation of inflation advocated by vast segments of the neoclassical-inspired view directly derives from a theoretical system in which inflation is essentially a monetary phenomenon (that overdetermines any conflictual claims dimension, even when it is considered) operating in a system that tends to full-employment. In contrast, the interpretation of inflation as a real phenomenon derived from opposing class relations in the sphere of production and where the economy is unlikely to be close to full employment is closely related to the theoretical foundations of critical political economy. Likewise, the disagreements between the advocates of hard and soft landing within the neoclassical view are indissociable from the long-lasting debate regarding backward-looking vs forward-looking expectations associated with Phillips Curve specifications. Thus, it is not possible to have a full comprehension of the foundations of the contemporary inflation debate without

having a background of the debates that emerged and remained open in mainstream and heterodox macro at least in the last forty years.

Secondly, *the widespread response to inflation based on hard contractionary policy (steep increase in interest rates) is not based on sound foundations.* In fact, most of the assumptions on which this response relies have been consistently disputed by critical political economics in the last decades and during this debate. The idea of contractionary monetary policy as an obvious, technical optimal solution to inflation is a myth. The adherence to this strategy is in great part explained by the interrelation of theoretical bias and institutional persistence, associated with the generalization of independent inflation-targeting central banks having interest rate policy as their (almost) single tool.

Finally, both these conclusions show us the urgency of increasing pluralism in macroeconomics teaching and practice worldwide. More pluralism is a necessary condition for more clear and emancipatory democratic debates where the intervenients understand the terms of the debate and are not doomed to accept policy choices with political and class consequences as technically driven truths.

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