

The Challenges of the COVID-19 Pandemic to Mainstream Macroeconomics and Neoliberalism

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Abstract

The paper focuses on challenges which COVID-19 pandemic imposes on mainstream macroeconomics and neoliberalism. It is not a new fact that the economic recessions generate great changes both in macroeconomic theories and policies. This claim is supported by the fact that the emergence of macroeconomics was strongly connected with the economic conditions in the interwar period, especially of the Great Depression, the 1930s. The first, Keynesian era in the macroeconomics was guided by the Keynesian idea of handling business cycles by using aggregate demand management and active economic policy. The second phase in the development of macroeconomics was also generated by the recession, however atypical with persistently high inflation and high unemployment (“stagflation” decade of the 1970s). Thus, began a new era of monetarist domination of macroeconomics with the victory of the political forces of the New Right, which brought neoliberalism to the global political and economic scene, with the ideas of a strong, but small state. Finally, the New Consensus Macroeconomics (or the New Neoclassical Synthesis) which combined perceptions from both approaches (New Classical and New Keynesian) and still propagating neoliberalism and globalism, has emerged during the period of Great Moderation. The foregoing New Consensus and the neoliberal paradigm have been seriously challenged by the Great Recession, 2007-09. However, both survived with slight modifications connected to financial sector management. Yet, the atypical recession generated by

the pandemic of COVID-19 and following health crisis, stroke the mainstream macroeconomics and the position of dominant neoliberalism, again. This time, the primary task of macroeconomics is to forecast the effects of various economic policy measures currently being conducted by policy makers around the world, as well as to forecast the duration and severity of the recession caused by the pandemic. Of course, the often-present question about the sustainability and superiority of the neoliberal approach to the organization of economic and social life, now with COVID-19 pandemic get new aspects with an uncertain perspective.

Keywords: New Consensus Macroeconomics, neoliberalism, economic policy

1. Introduction

Major economic recessions have induced changes to the dominant economic theory and in economic policymaking. This claim is proven by the emergence of modern macroeconomics, which is inseparable from the Great Depression of the 1930s and the specific economic problems during this worst recession in economic history. During the Depression, the dominant economic theory, based on neoclassical economics, did not provide theoretical explanations for the extremely unfavorable economic problems that economies faced over a long period of time (extremely high unemployment rates, contraction of economic activity, collapse of the financial and banking system). Neoclassical economics assumed that the economy was a self-regulating system that always returned to a state of optimal equilibrium. Government intervention should therefore be limited because it would only disturb the harmonious state of the system. Temporary deviations from the equilibrium are normal and the government should not react to them, but leave the economic system to self-balance. In this sense, cyclical fluctuations, of which economic recessions are a part, are normal and temporary situations that do not require government intervention.

However, the length and severity of the Depression, the extent of the economic downturn, and the great economic costs to individuals and entire economies inevitably called into question the then-dominant self-regulatory system. Rather than the Depression easing, as neoclassical theory predicted, it deepened over time. Neoclassical economics postulates a ‘laissez-faire’ policy based on the quantitative theory of money (the gold standard) and fiscal harmonization of the budget, with neither support for the financial and banking system nor assistance to the population and economy. The final reaction to the Depression in the United States, where it began, was President

Roosevelt’s New Deal, with extensive government intervention. This program was designed to provide jobs for millions of unemployed workers and to restore confidence in the banking and financial system, and in capitalism.

From today’s perspective, the creation of an economic program such as the New Deal, and even more its successful implementation, were extremely important for macroeconomics. It was the first such program of major state intervention in the economy that had positive results and succeeded in overcoming an economic depression. This had far-reaching consequences for the economic interpretation of the functioning of capitalist economies, economic policymaking and the role of government, and the ideological and political basis of society that developed in the following decades. Some of the measures in this program were social-democratic, such as the increased role of trade unions and the improvement of the position of workers (prohibition of child labor and a forty-hour working week) and increased social protections.

Keynes’s economic theory, which he had developed during the interwar period, significantly influenced economic policy after the Second World War. State intervention culminated after the Second World War and remained dominant until the economic recessions and macroeconomic changes of the 1970s. The specifics of these recessions, which were atypical because in addition to an increase in unemployment they also included the growth of inflation (‘stagflation’), again resulted in a turning point in the development of macroeconomic theory and the conduct of economic policy. This significant turning-point involved the rise of monetarism in macroeconomics, the return to some pre-Keynesian theoretical postulates, and the introduction of new concepts, the most important of which was the concept of expectations.

The representatives of the New Classical Macroeconomics (Robert Lucas, Thomas Sargent, Finn Kydland, Edward Prescott, Neil Wallace, Patrick Minford) once again insisted on the self-regulating character of the economic system and the perfect functioning of the market mechanism and also included rational expectations in macroeconomic models. Their theory, along with some of the propositions proposed by their opponents, the New Keynesians (Gregory Mankiw, George Akerlof, Janet Yellen, David Romer, Jordi Gali, Michael Woodford), became part of the New Consensus in Macroeconomics (also known as the New Neoclassical Synthesis), which was challenged for the first time by the Great Recession of 2008, and perhaps more significantly by the current COVID-19 pandemic crisis.

This paper focuses on the latest challenges to mainstream macroeconomics and neoliberalism, imposed by the COVID-19 pandemic, and asks whether the pandemic will lead to significant changes to concepts that have survived the challenges of previous recessions. What is happening today is unique in modern economic history, and significant change seems unavoidable. The uniqueness of the disturbance caused by COVID-19 in the economy, both on the aggregate supply side and the aggregate demand side, also reflects the lack of macroeconomic literature to explain it. It is similar to economic policy, which does not have an unambiguous answer to the economic consequences of the pandemic. Conventional economic policy measures to mitigate the economic downturn during the first waves of the pandemic today face significant constraints in the form of rising inflation as well as public finance disturbances. These limitations will largely determine which problems economic policy makers will have to solve in the post-pandemic era, but also which instruments they will be able to use to overcome them. The same can be expected for changes in the dominant consensus in macroeconomic theory.

The paper is organized as follows. After the introduction, the second section presents the impact of major recessions on the development of macroeconomics. The third part discusses the most important elements of the New Macroeconomic Consensus or New Neoclassical Synthesis. The fourth part analyzes the New Neoclassical Synthesis in the context of problems introduced by the COVID-19 health and economic crisis. The fifth part discusses whether well-known instruments of fiscal and monetary policy can be applied to current macroeconomic problems, or whether the economic policy needs to change. The last section concludes.

2. Major economic recessions and the development of macroeconomics

Economic theory plays a significant role in shaping our thinking, beliefs, and actions, whether consciously or unconsciously. The economic theory tries to explain how the economy works. In macroeconomics, the acceptance of certain theoretical concepts determines the commitment to greater or lesser government intervention and greater or lesser insistence on the market. Economic recessions have had a significant impact on the development of macroeconomic theory, and on its influence on economic policy.

2.1 Keynes, Postwar Keynesianism, and the Neoclassical Synthesis

One of the most important topics in the development of macroeconomic theory is the rise and fall of the Keynesian theoretical system and later Keynesianism. The significant change in economic policy after the Great Depression covered both monetary and fiscal policy. Monetary policy abandoned the gold standard and the quantitative theory of money, while fiscal policy was decisive in overcoming the recession. Keynes provided the theoretical basis for these changes in economic policy in *The General Theory of Employment, Interest and Money* (1936). This was a revolutionary book in the field of macroeconomics, with a completely new view of the way the capitalist economic system functions, the place and role of money and interest, the character of unemployment, and – through the introduction of suboptimal equilibrium – the state of equilibrium in the system.

In his analysis, Keynes used new analytical tools: the consumption function, liquidity preference, and uncertainty. Unemployment does not occur exclusively as a consequence of imbalance but is also present in a state of suboptimal equilibrium, which is established at an output lower than full employment output because the volume of employment is determined by the level of aggregate demand. Keynes's postulate of effective demand, equating aggregate supply and demand, is central to his theory. Explaining the concept of effective demand required a new theory of interest, money, and employment. Unemployment in Keynes's theory depends on the movement of macroeconomic aggregates, the most important of which is aggregate demand, which in turn depends on the marginal propensity to spend, the marginal efficiency of capital, and psychological factors that decisively determine the behavior of investors and consumers. Therefore, states of recession and expansion are integral to the capitalist system and arise from errors in the perception of returns made by investors due to psychological factors that create states of optimism and pessimism. Thus, according to Keynes, uncertainty regarding future economic developments is crucial. This makes recessions 'general' stages of capitalism, while full employment if reached, is a transitory phase.

Keynes's theory was interpreted by followers in various Keynesian schools, who abandoned some of the key postulates and accepted classical methodology based on the Walrasian approach. This constituted the 'neoclassical synthesis,' which was probably the most successful attempt at a consensus in macroeconomics, and whose basic elements were identified with Keynesianism. However, since in fact it was impossible to synthesize Keynes's revolutionary approach to

economics with the old, neoclassical approach, the neoclassical synthesis excluded the most important revolutionary elements (Barbera 2008, p. xii).

Keynesian macroeconomics was developed to produce standard Keynesian models derived from *The General Theory of Employment, Interest, and Money* (Mynski 2008, pp. 23–51):

1. Consumption function models
2. IS-LM model without the labor market
3. Neoclassical synthesis (a term formulated by the US Keynesian economist, Paul Samuelson):
 - a) IS-LM model with the labor market,
 - b) complete equilibrium.

The neoclassical synthesis returned to formulations of general equilibrium with the inclusion of the principle of effective demand, but in a simplistic framework reminiscent of neoclassical formulations. Paul Samuelson and Alvin Hansen tried to form a synthesis of macroeconomic ideas in the mid-1950s by integrating the settings of classical economics into Keynesian economics, thus abandoning some of Keynes' most important revolutionary views.

For neoclassical synthesis and Keynesians, the application of 'fine-tuning' (fiscal policy) is sufficient to achieve permanent full employment, which is why they considered post-war economic expansion to confirm the claim that cyclical declines in economic activity are a matter of economic history. In contrast to the neoclassical synthesis, the theories of primarily economic growth and business cycles of the second stream of Keynesianism, post-Keynesianism (the heterodox school or structuralism), retained Keynes's most important postulates. Post-Keynesians, however, remained in the minority, and the later development of New Classical Macroeconomics and its opposing New Keynesianism followed the neoclassical synthesis, creating a 'New Neoclassical Synthesis.' According to post-Keynesians, neoclassical synthesis is not a synthesis of ideas, but a classical theory complemented by Keynesian terminology. It led to the abandonment of Keynesian logic.

The complex macroeconomic theory offered by Keynes is simplified by reducing it to fiscal policy (fiscalism) and insisting on the state intervention that dominates postwar Keynesianism. The key element of the Keynesian economy was the Keynesian welfare state, which was connected to the dominant political forces that sought to integrate all social groups, including the working class. In

the decades after World War II, the Keynesian economic policy provided high rates of economic growth, low unemployment rates, and control over business cycles, together with internal social cohesion through the integration of labor unions and left-wing parties in the political system. The success of Keynesianism in the post-war period can be attributed to the possibility of the simple application of economic policy, and to the idea of resolving the most important social conflicts of capitalism with an increased economic role for the state (Prašćević 2012).

2.2 The Rise of Monetarism and Neoliberalism

During the 1970s the neoclassical synthesis was replaced by a debate led by the monetarist school, based on the Keynes-Wicksell debate and with a monetarist reliance on the Wicksell concept. Real economic trends (atypical recessions in the US, economic problems in other developed economies) increasingly turned macroeconomists to market solutions as the only response to high unemployment and persistent inflation, which had become the main economic problem.

Economic trends in developed economies, primarily the United States, were already deteriorating by the late 1960s, with declining profit rates, unused production capacity, and wage growth that outpaced productivity. After decades of accelerated economic growth and full employment, the Keynesian economy appeared to have no solution to the emerging economic slowdown.¹ The problem of persistent and rising inflation that economies struggled with over the next decade led to a change from fiscal to monetary economic policy, in which a low and stable inflation rate rather than full employment was promoted as the key macroeconomic goal.

¹ The economic recession in the United States began in late 1969 and ended in November 1970, with a weak economic recovery that prompted President Nixon to propose economic policy changes in order to achieve “prosperity without war.” Economic growth was to be fueled by short-term measures and the combination of a weak dollar, low interest rates, money supply growth, tax cuts, and rising government spending, with a policy of controlling prices and incomes to postpone inflation for the post-election period (after the 1972 presidential election). A new sharp recession began in November 1973 and lasted until March 1975, during which the first oil shock occurred in 1974. The Federal Reserve’s monetary policy was extremely inflationary, keeping short-term interest rates below equilibrium, and the monetary expansion culminated in 1979 with an increase in the money supply, again to help the election of an American president, in this case Carter. At the beginning of 1979, inflation was as high as 10%. At that time there was another oil shock as a consequence of the Iranian revolution. The fall in inflation in the United States was paid for by an economic slowdown, high unemployment rates of as much as 10% in late 1982 and early 1983, and economic recessions (January 1980 – July 1980 and July 1981 – November 1982).

The neoclassical synthesis and dominant Keynesianism did not have an adequate response to the deep and atypical economic recession of the 1970s, thus enabling the success of monetarism and the creation of a new anti-Keynesian standard macroeconomic model (Akerlof 2007, p. 7) based on the neoliberal paradigm.

Methodologically, monetarism did not completely abandon Keynesianism. However, monetarism had completely different recommendations for conducting economic policy, so the real break with Keynesianism occurred in the domain of economic policy-making. Monetarism did not break with Keynesian methodology, nor with the Keynesian analytical framework, but it ended the dominance of Keynesian macroeconomic management.

In economic theory, monetarism led to the reintegration of the monetary economy into macroeconomics. The monetarist approach to macroeconomic instability and business cycles focuses on the importance of money supply, in contrast to the previous emphasis on interest rates. The key source of cyclical fluctuations is changing in the money supply, which is an exogenous variable. Empirical research by M. Friedman and A. Schwartz has shown that in economic history monetary policy has more often been a source of instability than stability. Monetarists strongly oppose any use of monetary policy for countercyclical purposes because they believe the economy should be left to adapt to shocks, which increase the efficiency of the private sector; whereas economic policymakers and especially monetary authorities do not have the appropriate competencies.

Nevertheless, and despite the incompetence of monetary policymakers, monetarists have had a decisive influence on the goals of monetary policy and on the creation of monetary policy rules. Thus, during the 1990s many countries developed and implemented a new monetary policy concept, inflation targeting. This led to a decisive role for central banks, which required a new institutional framework regarding their independence and the transparency of monetary policy. The acceptance of the neoliberal concept in economic theory and policy was accompanied by political change in the form of the ascendance of right-wing political parties, such as the Republican Party in the United States the Conservative Party in Great Britain. They became implementers of the neoliberal concept through the well-known economic policies of Thatcherism and Reaganomics.

2.3 New Classical Macroeconomics and Rational Expectations

The New Classical Macroeconomics (NCM) marked a turning point because it was an expression of the aspirations of post-war macroeconomic theory to explain macroeconomic trends on the basis of the rational behavior of economic agents and to provide strong microeconomic foundations for macroeconomics. It also represents a turning point in macroeconomic modeling and the development of stochastic models of general equilibrium. The development of New Classical Macroeconomics marks a new stage in both theoretical macroeconomics and economic policy. The principles on which NCM was based represent a complete break with Keynesianism: the aggregate supply side was completely reversed, and aggregate demand as a possible factor in determining income or employment was rejected, even in the short run.

NCM introduces controversial assumptions about continuous market clearing, rational expectations, and inelastic aggregate supply. By incorporating the completely new concept of the hypothesis of rational expectations, the NCM revolutionized macroeconomics. In monetarism, expectations are adaptive and a systematic error in expectations is evident, while such error does not exist in rational expectations.

The application of the New Classics in macroeconomics implied the following: 1) the problem of time inconsistency, 2) the inefficiency of economic policy, 3) the natural rate hypothesis, 4) the perfectly inelastic curve of aggregate supply, and 5) acceptance of the Ricardo-Barro effect (Ricardian equivalence theorem). These postulates, together with the use of a common methodology based on the ‘microeconomic foundations of macroeconomics,’ fueled the radical anti-Keynesianism that prevailed in mainstream macroeconomics up until the Great Recession (2007–2009).

A special contribution of New Classicalism is its explanation of cyclical economic fluctuations. In the theory of monetary business cycles, the cycles are a consequence of the actions of rational subjects who may be surprised by an unannounced monetary shock due to ‘signal extraction’ problems.

In the next phase of the development of the New Classics, in the theory of real business cycles (RBC), cycles are the result of real shocks on the aggregate supply side and are mostly caused by large fluctuations in the rate of technological change. Shocks that affect the production function

also cause fluctuations in relative prices, to which rational economic entities respond optimally. Observed fluctuations in products and employment are characteristics of equilibrium, which is why these are equilibrium business cycles resulting from the optimal response of rational entities to changes in the economic environment. The theory of growth and the theory of fluctuations are integrated, while the real business cycle model represents a stochastic dynamic equilibrium model of growth. Changes in the volume of employment during the economic cycle reflect changes in the number of people who want to work. Therefore, these are Pareto effective responses to shocks that affect the production function. Monetary policy is irrelevant to the explanation of these fluctuations, and money is super neutral (Prašćević 2008).

The popularity of RBC theories contributed to the conclusion that there was an anti-Keynesian ‘intellectual monopoly’ in both theory and economic policy, supported by real economic trends indicating that on average business cycles became weaker in terms of the economic downturn during recessions. Among the factors that led to the mitigation of cyclical economic fluctuations were the following: reduced cyclical fluctuations in employment, an increase of an acyclic public sector, the increased importance of automatic fiscal stabilizers, a decreased frequency and intensity of financial crises, an appropriate fiscal tax policy, decreased fluctuations in the rate of money supply, and economic agents’ increased belief in stable economic growth (Zarnowitz 1996, p. 3–4).

3. The New Consensus in Macroeconomics and the Era of Great Moderation

New Classical Macroeconomics predominated and determined the main course of macroeconomics after monetarism, along with attempts to create a New Consensus with the opposing school of New Keynesians in the form of a New Neoclassical Synthesis.

The New Consensus in macroeconomics is linked to the most stable period since World War II, the so-called period of ‘Great Moderation’ (1984–2008).² This stability was due to several factors: 1) improvements in monetary policy, which led to a reduction in inflation rate volatility, 2) financial innovation and globalization, 3) improved inventory management methods, and 4) few exogenous shocks affecting the economy – ‘good luck’ (Dadkhan 2009, p. 230).

² Stability was only interrupted by a weak and short recession in 2001 (Dadkhan 2009, p. 230).

During this period the global rise of the neoliberal economic and political project continued, bolstered by a series of revolutions that resulted in the collapses of socialism in Eastern Europe, symbolized by the fall of the Berlin Wall. Consequently, the Eastern European countries entered a process of political democratization and transition to a capitalist economy, which proved challenging for economic policymakers and academia in the transition countries. The process of economic and political transition took place within the framework of the neoliberal economic and political project.

Paradoxically, the former socialist countries were the biggest advocates of neoliberal ideas, including economic neoliberalism, as a protection against the return of left-wing political forces. The neoliberal era in economic policy is linked to the Washington Consensus, which was originally a set of economic policy measures and economic reforms aimed at imposing neoliberal economics on Latin American countries in the late 1980s. It came to represent guidelines for the realization of the process of economic transition, and beyond that as the basis for the model of growth in transition countries. The Washington Consensus even became synonymous with the mainstream of macroeconomics: the international financial institutions to which the transitioning countries turned for help in the process of macroeconomic stabilization instructed them to apply the Washington Consensus.

Although we talk about a consensus in macroeconomics between two opposing macroeconomic schools, Keynesian and classical, in fact, the settings of mainstream macroeconomics were essentially classical. The Keynesians eventually renounced Keynes's legacy and gave in to the persistent classical demand for the introduction of rationality, a hypothetical-deductive abstract approach to modeling the behavior of individuals that determines both macroeconomic results and macroeconomic trends.

The New Synthesis was further expanded with the development of dynamic models that took into account the behavior of the 'representative agent.' However, critiques of the model challenge the 'representative agent'; i.e., they ask whether it is possible to speak of a universal (uniform) behavior of the 'representative agent' that is aggregated in the macro model without taking into account the real motives that characterize decision-makers. In addition to a representative economic entity, economic policymakers are also involved. It is assumed that representative economic policymakers maximize utility while deciding solely on the basis of realistic results,

taking into account neither how they should or should not behave, nor norms.

This criticism of the supposed motives that determine individuals' behavior is the essence of the criticism that the New Synthesis models are too simplistic, give insufficiently accurate results, and cannot adequately predict and forecast future economic trends (Akerlof 2007, p. 7).

However, the success of this brand of mainstream macroeconomics was reflected in high rates of economic growth and low rates of inflation, especially in developed economies. Reducing the variability of economic activity through lower inflation was considered the most important consequence of the change in modern macroeconomics to fighting inflation and changing monetary policy through central bank independence, monetary policy transparency, free capital mobility, deregulation of the labor, capital, and goods markets, and significant financialization of economies (deregulation and expansion of financial markets). Rules governing the conduct of economic policy ensured the transparency of economic policy and prevented its abuse.

4. The Great Recession and Post-Recession Era of Stagnation – Challenges for New Consensus Macroeconomics

The Great Recession began during two decades of relatively stable global economic growth, the 1990s and 2000s, and was the longest and sharpest recession in the post-war period, with the largest decline in income, consumption, and investment, and rising unemployment. The recession followed the well-known pattern of cyclical fluctuation: initially (until mid-2008) it was not deep (measured by declining income and GDP, or rising unemployment rates), followed by a significant decline until the second quarter of 2009, and then a slower decline, reaching the trough of the cycle in the US in June 2009.

Keynesian and classical macroeconomics had different explanations of both the causes and the ways of overcoming the Great Recession of 2007–2009. While Keynesians saw the causes in the deregulation and expansion of financial markets and the inadequate role of the state in the functioning of an economic system based on rigid markets (especially the labor market), the classicists saw the causes in monetary and fiscal policy mistakenly deviating from the rules. However, during the crisis, economic policy returned to Keynesian recommendations to increase aggregate demand; then, faced with a slow recovery and the negative consequences of stimulus measures (primarily fiscal and monetary policy) after it had ended, economists returned to the

classical paradigm.

4.1 The Response of Mainstream Macroeconomics to the Great Recession

In macroeconomics, pro-Keynesian ideas were already being accepted in the initial phase of the recession, primarily in the domain of economic policy. This soon spread to macroeconomic theory, and many theoretical postulates of the New Neoclassical Synthesis were questioned, especially those that emerged from the New Classical Macroeconomics.

In macroeconomics, there was renewed interest in the revolutionary concepts of Keynes presented in his General Theory, particularly his concept of the fundamental uncertainty and inherent instability of the capitalist system. Post-Keynesian macroeconomics had anyway never accepted either the neoclassical consensus or the New Neoclassical Synthesis, considering them to be a betrayal of Keynes's work. The Great Recession was blamed on both inappropriate economic policy and the ruling macroeconomic theory of the New Neoclassical Synthesis. To overcome the recession, it was necessary to find new paths.

Practically, economists returned to the Keynesians' recommendations for overcoming economic recessions by increasing aggregate demand. The extensive fiscal stimulus was designed to compensate for the decline in private demand, to last long enough to cover the uncertain duration of the recession, to be diversified and sustainable in the medium term, and to eliminate possible negative effects on interest rates in financial markets, as well as the consequences for personal consumption. This was ensured by appropriate monetary expansion. The International Monetary Fund departed temporarily from its long-term policy of stable public finances, granting countries higher state budget deficits.

For two years, Keynesian measures to stimulate aggregate demand were combined with measures to increase financial stability and wider assistance to the financial sector. This meant abandoning the monetary and fiscal conservatism of the decades preceding the global recession.

The recession called into question important postulates on which previous economic policy and mainstream macroeconomic thought had rested.

1. Macroeconomic fluctuations that were considered as having been successfully brought under control had become a significant macroeconomic problem.

2. The problem of the liquidity trap gained in importance because it had been shown that the problem of a low nominal interest rate (almost equal to zero) was not uncommon.
3. Major problems in the functioning of the financial system showed that insufficient attention had been paid to financial regulation.
4. High unemployment rates, which in previous years had been almost unthinkable, became the accepted norm.
5. Neo-Keynesian dynamically stochastic models of general equilibrium (DSGE) were of little use in explaining the origin of the crisis and finding ways to overcome it (Praščević 2014, str. 29). Monetary policy had proved inefficient, and these factors supported the reasons for returning to the traditional Keynesian economic measures, whose backbone was fiscal policy. At the same time, economic policy goals changed: they were no longer only concerned with price stability (low and stable inflation rates); employment also became a legitimate economic policy goal. Thus, at least temporarily, the dominance of firm economic policy rules was ended, and economic policy began to be seen more as a ‘capacity’ rather than as the result of complex macroeconomic models involving a large number of interdependent macroeconomic variables.

4.2 Post-Recession Stagnation Challenges and Mainstream Macroeconomics

In mid-2010, economic orthodoxy changed direction once more: pro-Keynesian measures were abandoned when economies found themselves facing significant public finance problems due to the extremely high cost of rescuing banks, insurance companies, and the overall financial sector, together with expenditure to stimulate economic activity. Countries began to face a sovereign debt crisis and so started applying austerity measures that had recessionary effects on economic trends. This was taken as a sign that economic policy should abandon the Keynesian economic policy of stimulating aggregate demand and return to ‘more normal’ macroeconomic management. In many countries, it meant implementing fiscal consolidation measures.

However, the implementation of these programs was complicated by the very weak economic recovery, both in the most developed economies and at the global level, contributing to the fear of starting a new recession. Thus, economic policymakers were faced with a choice: solve the unfavorable state of public finances and probably enter a new recession, or continue with monetary and fiscal expansion and ensure a significant economic recovery at any cost. The answer to this dilemma depended on which macroeconomic theory economic policymakers followed.

Keynesians advocated the continuation of expansionary policies until high inflation emerged as a threat, and Classicalism advocated the application of austerity measures that would both solve the problem of public finances and release financial resources for private investment.

However, both economic schools had to face the problem of a zero-lower bound (ZLB). Developed economies were trapped in a ZLB environment, so monetary policy became an inefficient contracyclical actor over a long period of time, with significant consequences for both monetary and overall economic policy. There were also consequences for mainstream macroeconomic theory. To maintain faith in the implementation of monetary policy for stabilization purposes, the mainstream macroeconomic theory would have to implement non-standard monetary policy instruments such as quantitative easing. Alternatively, the inflation target could be increased (up to 2%) in order to reduce the real interest rate, thus increasing the effectiveness of monetary policy in influencing real economic aggregates.

The second way of overcoming the ZLB problem was to adopt an active fiscal policy. This was a significant contradiction to the New Consensus in macroeconomics, one of the key elements of which was Taylor’s rule based on only one instrument: policy interest rate as a short-time interest rate that could be directly controlled by the central bank in the open market. On the other hand, in the New Consensus, fiscal policy was of secondary importance for short-term economic stabilization due to the Ricardian equivalence theorem, the superiority of monetary policy, time lags in the design and implementation of fiscal policy, and political motivation in its creation (Praščević and Ješić 2019, p. 7).

However, fiscal policy became an important issue during the period of poor post-recession recovery, often called the “age of secular stagnation” (Summers, 2014). This was not the only change: responses to the global economic problem of slow economic recovery and persistently high unemployment required significant changes in the preferred social and economic model. This meant abandoning the neoliberal approach and accepting a more important role for government and state intervention to ensure the well-being of both the national economy and citizens. Ideas very similar to the long-abandoned economic school of mercantilism also gained importance. This was especially the case in politics, leading to increased economic and political nationalism and the rise of populism, as in the election of President Trump in the United States.

During the decade of economic stagnation, income distribution became more unequal, the economic elite became wealthier and more powerful, and social consensus and cohesion broke down. As the economic and social status of many citizens in developed and industrialized countries declined, faith in the economic and social progress promised by the old model of capitalism plummeted and right-wing populism emerged in many developed democracies, such as the USA and EU member states.

The neoliberal economic and political project and the macroeconomic mainstream did not have to wait long for a new challenge. The next shock was not economic but the appearance of a new and deadly coronavirus at the end of 2019.

5. The Shock of the COVID-19 Pandemic to the Global Economy and Mainstream Macroeconomics

When the world was confronted with the spread of a new disease in February and March 2020, no one could predict with certainty the severity of the shock to economies, businesses, and the population in general. It was clear that this was a unique shock that would hit both aggregate demand and the aggregate supply side. The shock was not an economic factor but was specific. Usually, shocks that affect the economy are financial, related to energy (oil shocks), or monetary shocks generated by the state itself via the central bank. Some shocks act on the aggregate supply side, so major positive technological shocks have been important sources of economic expansion and booms, while oil shocks are the most important negative shocks on the aggregate supply side. For the first time, the shock was caused by a new virus that generated a health crisis not seen in more than a hundred years, with significant consequences for economic trends and people's daily lives.

Today, the nature and duration of the crisis caused by the emergence and spread of the new coronavirus present a new temptation for neoliberal capitalism and a challenge for Western democratic societies based on human, economic, and political freedoms, liberal ideas, and mainstream macroeconomics. The complexity of the situation is even greater due to the fact that the shock to the global economy continues, and its end is uncertain (Praščević 2021a, p. 34, Čavrak 2020, p. 4).

In the beginning, it was impossible to predict the length or dynamics of the coronavirus shock because little was known about the virus itself and the disease it caused. Following the example of China, other countries soon adopted significant epidemiological measures including lockdowns, restricted movement, and social distancing, which had significant negative effects on their economies.

The 21st century began with significant threats from new strains of viruses that cause infectious diseases and can have pandemic proportions: the influenza virus (2006, 2009) and coronavirus (2003, 2012). Although it had been predicted that the 21st century would be a century of new viral infections of pandemic proportions, the coronavirus pandemic came as a surprise not only to the general public and the business sector but also to economic policymakers everywhere, including in the most developed countries.

That surprise required appropriate answers from governments and economic policymakers, whose function is to maintain macroeconomic and financial stability and to help citizens and the economy.

5.1 The Character of the Shock

When pandemics of new influenza strains appeared at the beginning of the 21st century, they encouraged economists to consider the possible macroeconomic effects not only of these pandemics but also of possible pandemic scenarios in the future. Models have been developed that include pandemic-related medical variables that are important for determining economic effects. Different scenarios of milder and more severe pandemics have been considered, with assumptions based on previous pandemics. Analyzing the possible application of these models to the current pandemic, it is clear that some of the assumptions, even in the case of a more severe scenario, were too mild for the current situation. The current pandemic is the most difficult that modern humanity has faced, and it is very difficult to determine its economic consequences, especially long term (Praščević 2021 b, p. 53).

The measures taken during the H1N1 Swine flu pandemic (2009–2010) did not significantly affect economic trends or people’s daily lives, as has been the case in the past year and a half with COVID. Although the 2009 H1N1 pandemic caused significant human suffering, it was not a significant threat to either dominant or developing macroeconomies. However, the 2009 pandemic can be seen as a general rehearsal for what would happen in 2020 and 2021 with the new

coronavirus pandemic that causes COVID illnesses.

Table 1 presents an overview of the occurrence of influenza and coronavirus strains and basic data on epidemics and pandemics during the 20th and 21st centuries.

Table 1: Major pandemics during 20th and 21st centuries

<i>Influenza viruses</i>		<i>Coronaviruses</i>	
<i>Spanish flu (1918 – 20)</i>	Infected: 33% (or 500 million) Mortality rate: 2–3%, Pandemic severity: 5	<i>SARS-CoV-1 (2003)</i>	<i>Mortality rate: 9%</i>
<i>Asian flu (1957–58)</i>	Infected: >17%, Mortality rate: 0.2%–0.67% Pandemic severity: 2	<i>MERS-CoV (2012)</i> (Middle East respiratory syndrome)	<i>Mortality rate: 34.5%</i>
<i>Hong Kong flu (1968–69)</i>	Infected: >14%, Mortality rate: <0.2% Pandemic severity: 2	<i>COVID-19 (2019 – 21)</i> <i>pandemic</i>	<i>Mortality rate: 2.1%</i>
<i>Russian flu (1977-79)</i>	Deaths: 0.7 million		
<i>Swin flu (NIH1) (2009 – 10)</i>	Infected: 11–21% Mortality rate: 0.01% Pandemic severity: 1		

Economic models that analyze the possible macroeconomic consequences of pandemics include three medical variables (Jonung and Roeger 2006, p. 6):

1. The morbidity rate,
2. The number of work weeks lost,
3. The mortality rate.

Estimates of the values of these variables in the models were based on previous pandemics: however, they have proven to be too mild, reinforcing the uncertainty that is a key feature of this pandemic. The specifics of the COVID-19 pandemic are shown in Table 2.

Table 2: Specifics of the COVID-19 pandemic

Date of first identified case	December 2019
Location of first identified case	<i>WhuHan (China)</i>
Total Deaths (up to 8th October 2021)	4,840,077
Confirmed Cases (up to 8th October 2021)	237,087,696

However, although new deadly strains of SARS-CoV-2 (the ‘Delta variant’) are ravaging the world, more than a year and a half after the appearance of COVID-19 there is some optimism. Advances in medical science in the research of the SARS-CoV 2 virus have led to the development of vaccines in many countries. The most well-known are Pfizer, Moderna, Sputnik V, and several Chinese vaccines (Sinopharm, Sinovac, etc.). Many millions of vaccines are being produced worldwide, and populations in the more advanced countries are being vaccinated, with significant reductions in infection rates and deaths. The economy, as well as everyday life, is slowly returning to some kind of normality.

Together with its specific characteristics, the rapid spread of this viral infection has been enabled by globalization and the frequent movement of people between countries and continents. Humanity has not faced these specifics before, and they must be included in economic models describing the dynamics of economic trends during the current pandemic, and in the decision-making of economic policymakers. The specifics of the virus itself and the diseases it causes have resulted in significant and long-term consequences for aggregate supply and aggregate demand: it is a shock that affects both sides of the economy. This is new: previous viral diseases primarily affected the supply side, whereas now significant disturbances are also present on the aggregate demand side. This also holds for future trends in the amount of aggregate demand, which must be assessed by including the specifics generated by COVID-19.

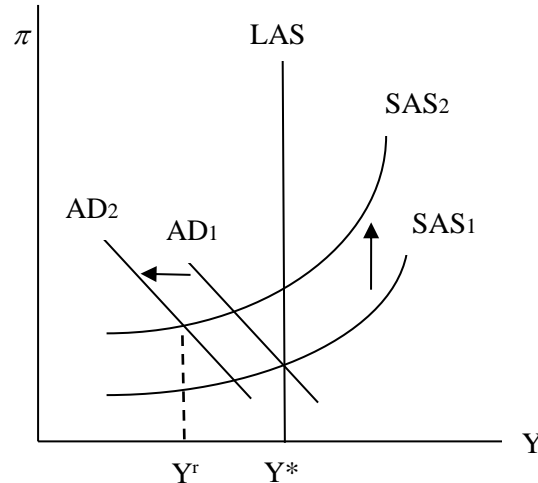
5.2 The Impact on Economies and Post-Pandemic Challenges

Even before the COVID-19 pandemic, the estimated global economic trends for 2020 and 2021 indicated constraints that threatened economic growth. There were risks and uncertainties related to economic policy, as well as significant geo-political tensions and regional problems and conflicts. Ecological problems are foremost among the global risks that could challenge the otherwise very ambitious goals for achieving sustainable development in the next decade. The most significant of these is the climate crisis and the global warming that is causing extreme

meteorological phenomena across the globe. This is the environment in which the COVID-19 pandemic appeared.

During the first months of 2020, the virus spread from China to other countries and continents, especially Italy, Iran, and South Korea, resulting in financial disturbances. These disturbances distorted financial markets (due to ‘corona-crash’), and particularly affected certain industries, notably tourism and services and also air transport, where companies recorded huge losses. Extreme measures were implemented, quarantining large areas or entire countries (first Italy and then other European countries). Economic and other human activities were radically reduced, with far-reaching consequences for economies and people’s lives. This called into question the foundations on which the market economy rests, as well as the democratic system of government. Governments had to provide effective public health measures to support health care systems. They also had to estimate the economic costs imposed by the pandemic and plan how to help people and businesses overcome the economic consequences.

Figure 1: Recession mechanism due to coronavirus pandemic in the AS-AD model



Source: Prašćević 2020, p. 49.

As soon as decision-makers became aware of the severity of the disease and its contagiousness, it was clear that economies would enter a recession. It was unknown how long the recession would last or how strong it would be, or the extent to which governments would be able to mitigate it. It was clear that the shock was affecting both the aggregate demand side and the aggregate supply

side, and that government measures needed to target both. All of this required that governments provide significant financial resources for the large aid packages that most economies, especially developed ones, had started implementing by the spring of 2020.

In the standard AS-AD model we can consider the recession due to the COVID-19 pandemic by observing the shift of the short-run aggregate supply curve (SAS) upward, due to the adverse aggregate supply shock caused by reduced production due to the pandemic and epidemiological measures (squeezing companies whose profits are hit by the virus). The aggregate demand curve also shifts to the left due to reduced demand. The new equilibrium will be settled at a lower level of output (Y^T) which is far below the natural output level (Figure 1). The pandemic's impact on inflation generates a mix of demand and supply shocks that drive inflation in opposite directions. Consequently, the measures to overcome recession should focus on the aggregate supply side of the economy in order to encourage economic activity and production (industrial output, services, etc.). The measures should also affect aggregate demand by increasing consumption and government spending: fiscal and monetary expansion has to be implemented in order to move the aggregate demand curve in an adverse direction and counteract the recession.

However, after some of the restrictive epidemiological measures were abolished the growing aggregate demand inevitably led to rising inflation along with the economic recovery. That also depended on the behavior of the aggregate supply, which did not fully recover but was influenced by other shocks that led to an increase in energy and food prices. They represent the negative supply shocks, the consequences of which the creators of economic policy now face, and which will also be present in the following period.

The short-run aggregate supply continues to shift upward even today, when we can talk about post-pandemic challenges to economic policymaking. Such upward shifting is due to several factors. First, disturbances in the markets during the most difficult months of the pandemic led to a reduction in production and disruption of supply and production chains. For some products, many of which are important inputs in industrial production, these disturbances have not been corrected. Second, rising energy and food prices are having a negative effect on final product prices. Therefore, the long-run effects of pandemics on inflation trends have become an important macroeconomic issue in the post-pandemic period. For nearly a decade before the pandemic, the

inflation trend fell steadily below its initial level, but now we can expect this to change, which could be controversial for both policymakers and academia.

5.3 The Impact on Mainstream Macroeconomics

Both academic economists and economic policymakers have been preoccupied with business cycles, especially the issues of recession and weak economic recovery that accompanied the previous Great Recession (2007–2009). The reasons for this have already been explained in the paper. As the shock of the pandemic resulted in an economic contraction of varying strengths in most countries, the topic of business cycles has regained its importance. Debates on the effectiveness of state intervention, both monetary and fiscal, have been revived. The pandemic shock promises to be long-lasting and is unique in recent history: in addition to the economic recession it has caused a general social crisis; for example, in health and education. Many new questions have arisen in economics and other areas such as law, psychology, and politics. It is important to recognize that this is happening in the context of the still-dominant neoliberal economic and political project, which largely determines the answers.

In mainstream macroeconomics, the impact of the pandemic can be observed in two areas. The first is the attempt to develop a macroeconomic model that explores macroeconomic impacts in the form of lost GDP, investment, and economic growth. This model should also analyze different scenarios of future macroeconomic development, as well as the possible effects of governments' economic policy measures. The second is the impact that the effect of a single pandemic shock could have on changing the dominant doctrinal framework of mainstream macroeconomics. Both segments are based on the postulates of the New Consensus in macroeconomics, or the New Neoclassical Synthesis. Thus, the dynamic stochastic general equilibrium (DSGE) model is still being used in policymaking during the COVID-19 pandemic (Pfeiffer P. et al. 2020).

Although there has been no consensus and no clear answer to the question of what the package of economic policy measures should cover, some important facts and elements have emerged. First, support was provided to the tourism and hospitality sectors and connected services including the entertainment industry³ (hotels, airlines, restaurants, transportation companies, tourist services, convention centers, casinos, sports teams, travel agencies). Therefore, to mitigate the impact of

³ One of the world's largest industries, comprising more than 9.3% of global GDP.

the severe pandemic shock, economic policy measures should be directed towards these sectors, and also to smaller businesses.

Second, besides smaller businesses and companies, vulnerable households and social groups have to be supported, in particular the millions of workers in developed economies who lost their jobs during the first months of the pandemic.

Third, both monetary and fiscal policy should play an important role in counteracting the effects of the pandemic. However, taking into account macroeconomic theory regarding the limitations of monetary policy in stabilizing the economy, and especially in combatting recession, as well as the experience of overcoming the last Great Recession (2007–2009), it is evident that fiscal policy will form the backbone of economic policy to mitigate the economic effects of the coronavirus pandemic. Automatic fiscal stabilizers were allowed to operate fully in all countries but a sizeable discretionary fiscal response was also necessary.

Fourth, given that the problem of the zero lower bound (ZLB) on nominal interest rates (which has been present for a long time in major economies (USA, EU, Japan)⁴ due to the Great Recession (2007–2009) and long-lasting post-recession stagnation) brought various unconventional measures to the fore in both monetary and fiscal policy, these measures should be even more applicable in overcoming recessionary movements. These measures could induce different scenarios across countries according to the strength of the specific economy, the state of public finances, and the uncertainties and risks of internal and external imbalances that could worsen future economic movements. However, authorities should try to ensure liquidity and thus help households and firms that face cash-flow problems.

Fifth, as the pandemic is a global phenomenon, we can conclude that the resulting economic problems and recession are also global. It is very important to keep this in mind, because we can conclude that countries will be unable to provide significant assistance to others, as they will be focusing on their own economy. This may be particularly significant for less-developed

⁴ Several central banks could be constrained by the zero-lower bound on policy interest rates: interest rates in Europe and Japan were already extremely low before coronavirus, and the US Federal Reserve has already cut interest rates as part of emergency measures.

economies whose economic performance and public finances did not allow the implementation of extensive state aid programs after the outbreak of the pandemic.

Sixth, the effective and timely economic stabilization necessary to overcome the recession that will follow the pandemic should be coordinated within and across all the major economies. It is also important that international financial institutions such as the IMF become involved. Underdeveloped and developing countries will need assistance to overcome the economic effects of the pandemic.

Finally, current macroeconomic developments present new challenges for economic policy and macroeconomics, from high budget deficits, through disruptions in production and the supply of goods and rising energy and food prices, to the possibility of rising inflation. Unlike historical pandemics that generated deflation, this pandemic has an atypical impact in the form of rising inflation. The question is how long the episode of rising inflation will last, because the future of both economic policy and the New Consensus in macroeconomics will depend on it. If inflation becomes persistent in the coming period, it will significantly limit the possibilities of economic policy to further help economic entities and households. Economic policy makers will have to deal with solving the problem of inflation in order to avoid inflationary expectations that can significantly burden the economies and any decision-making in them.

6. Conclusions

The great economic recessions have had a decisive influence on the development of macroeconomic theory, as well as on attempts to reach a consensus in macroeconomics. They also changed economic policy, resulting in the emergence of modern macroeconomics and the hegemony of Keynesianism during and after the Great Depression of the 1930s, and the rise of monetarism and the neoliberal project in the period of atypical recessions in the 1970s. Consensus in macroeconomics is associated with periods of relatively stable economic trends. The neoclassical synthesis emerged in the 1950s, while the New Neoclassical Synthesis (or New Consensus in Macroeconomics) emerged during the era of Great Moderation. These consensuses, (referring to the dominant macroeconomic model and, to an even greater extent, to recommendations for conducting economic policy), have been called into question by periodic recessions, as with the New Neoclassical Synthesis and the Great Recession of 2007–2009. The neoliberal economic and political project that is behind the consensus in macroeconomics has

been repeatedly disturbed by various shocks, mostly of a financial nature. Although the Great Recession was the biggest challenge neoliberalism had faced, and despite the decade of stagnation that accompanied the recession, it managed to survive.

The COVID-19 pandemic is a unique shock that has caused an economic recession, negatively affecting both aggregate demand and aggregate supply. Governments have taken extensive measures to help their economies and their citizens. Their fiscal aid packages have resulted in growing budget deficits and public debt in countries around the world. In addition to fiscal expansion, monetary expansion measures have continued. Specifically, and atypically, in the period when there were signs of an end to the pandemic the economic recovery was accompanied by rising inflation. Which economic policy is pursued in the future depends on whether this inflationary trend continues? For now, the most important postulates of the New Consensus in macroeconomics are being maintained, as well as the entire neoliberal economic and political project. However, the complexity of the problems caused by the pandemic, and not only in the economy, indicate the possibility that in the near future there will be significant changes in the macroeconomic mainstream.

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