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On Supply-Side Inflation and Some Unconventional Indicators for Measuring Inflation

Vakhtang Charaia[1*] & Vladimer Papava[2]

[1] Grigol Robakidze University, Georgia

[2] Ivane Javakhishvili Tbilisi State University, Georgia

[*] Vakhtang Charaia, Corresponding Author v.charaia@gruni.edu.ge

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Abstract

The paper provides an analysis of the inflation problem caused by the COVID-19 pandemic and continued by Russia's war against Ukraine, through different channels, including global supply chain disruption, increased governmental spending, decreased supply of goods and, etc. Inflation, which in this case was supply-side driven inflation, caused serious debates in terms of how to tackle the challenge. Should central banks use their standard instruments and is it enough to use the old-fashioned inflation index to create an economic recovery and anti-inflationary policies for different countries, especially when speaking about import-dependent, consumer-style developing countries? Herein, we analyze the most recent challenges of the inflationary process, starting from the point of how it launched and finishing with the issue of how to overcome this current crisis. Some unconventional macroeconomic indicators are also offered for governments and central banks for a better and more in-depth understanding of inflation and for the creation of better policy vis-à-vis inflation.

Keywords

Supply-Side Inflation, Supply Chain, Munflation, Agflation, Covid-19 Pandemic, Russia-Ukraine War

1. Introduction

Because of its worldwide scale and the economic crisis level triggered, COVID-19 pandemic has been in the focus of economists and international financial institutions from the very beginning. Various economists even created specific economic terms to name the event adequately, such as: "coronomics" (de Alwis, 2020), or "coronanomics" (Eichengreen, 2020), mainly compounding the words "corona" and "economics" in different variations, as well as "coronomic crisis" (Papava, 2020).

Along with other major problems the coronomic crisis brought to the world is—high inflation, which became a crucial challenge for politicians and economists (e.g., Acemoglu, 2021a; Barro, 2021; El-Erian, 2021b; Krugman, 2022a; Reinhart & Luckner, 2022). Clear evidence comes from the United States, where the inflationary challenge was called “Bidenflation” (Cassidy, 2021).

It has not been anticipated that high inflation, in some countries even breaking the historic maximum of several decades, could be a result the coronomic crisis (Furman, 2022). Even though the International Monetary Fund (IMF) believed that inflation would return to pre-pandemic levels by mid-2022 (Caselli & Mishra, 2021), this is not a fact already. It was difficult to predict the inflation rate for 2022, looking through the prism of 2021 (O’Neill, 2021), having various unclear/unknown factors. Consequently, according to different authors, the risk of stagflation gradually becomes actual (El-Erian, 2021a; Roubini, 2021a, 2021b). However, some believe that the “flation” fragment of the story won’t last for very long, and sooner than many believe, the Fed may find itself reversing course, trying to undo the “stag” (Krugman, 2022b).

On top of Coronomic-related issues, there is no clear vision on the Russia-Ukraine war consequences, which has delivered new problems to the world inflation. The latest outbreak of Russia’s war in Ukraine and economic sanctions imposed by the West against Russia and Belarus, further complicated economic problems brought by the COVID-19 pandemic (for example, Hannon, 2022). While the full-fledged exit from the pandemic—pandexit (Davies, 2021) has not yet taken place as a result of which the economic crisis caused by the pandemic (Papava, 2021) is added to the economic crisis caused by Russia’s war in Ukraine and economic sanctions against Russia (Papava, 2022a).

2. Supply-Side Inflection Challenge

Coronomic crisis made even a 50-year historic data practically inappropriate for predicting inflation neither during the hot phase of the pandemic crisis (Weber, 2021), nor afterward, when it slightly calmed down. Economists even have not agreed on, how to meet this decade’s high inflation in various countries, should it be the combination of reducing public spending and increasing interest rates, or maybe decreasing interest rates, or introducing price controls (Rodrik, 2022), supporting innovative financial technologies for business support (Charaia et al., 2021; Charaia & Lashkhi, 2021), or maybe controlling exports and imports of essentially important products, such as wheat and oil or other products.

A mistake made in formulating economic policy during the coronomic crisis is to view the inflation caused by this crisis as a macroeconomic problem (Galbraith, 2021) when, in fact, inflation is mainly precipitated by the disruption of global supply chains (Charaia et al., 2022). To better understand the problem brought by the pandemic, current high inflation issues should be seen from the economics prism (Rodrik, 2022), i.e., economists must look deeper into the reasons of this particular inflation, whether it is an increase in demand, a fall in supply or the combination of different factors (Sachs, 2021). The deep analysis will explain if there is anything positive coming from this inflation (James, 2021).

In practice, there are two core drivers of inflation and those are: demand-pull inflation and supply-side inflation. The latest is usually caused by either disruption in the supply chain or by the increased cost of production / materials / labour / transportation, or even through a combination of different factors simultaneously.

The negative role in causing higher inflation was also played by the theoretically positive governmental action—to provide society with financial aid, aiming to overcome the pandemic challenges (Weber, 2021). Some other studies suggest that inflations can also be provoked/supported (at some level), by money remittances in countries significantly dependent on this instrument (Dilanchiev et al., 2020). At the same time, the global pandemic has led to the distraction of international supply chains (Derviş & Strauss, 2020), leading to a decrease in supply and, thus, a rise in inflation. Some believed that the reason for the inflation increase was driven by the short-term supply-side bottlenecks (Stiglitz, 2021), yet, it came out, that a total meltdown of the global production system had happened (Coyle, 2021).

As a result of supply-driven inflation, central banks all over the world faced challenges they did not recognize so far, at least from the perspective of the actions undertaken. Since the central banks are equipped with the tools to regulate demand-driven inflation, it is essentially impossible for them to impact supply-driven inflation. It is simply not possible from the central banks' position to impact or even worse - restore the disrupted global supply chains. This situation has created some confusion in the measures taken by central banks, especially when these banks apply the inflation targeting regime in monetary policy (e.g., Chikobava, 2021; Cochrane, 2021; Roach, 2022). In particular, in order to limit demand by reducing the money supply, these banks raised interest rates, raising the price of money, making it even more difficult for firms to borrow in order to increase their supply (at the same time, this measure helped to increase savings which will become an additional source of lending in the future).

Because of the supply-driven inflation phenomenon, brought by the supply chain disruption the term "supply-chainflation" (Pride, Reynolds, & Vovk, 2022) was invented, which is made up of "two English words "chain" and "inflation." As the disruption of global supply chains not only reduces supply but also reduces production directly due to the disruption of the binding chains of entire technological cycles, we can conclude that supply-chainflation is one of the causes of *underproduction inflation* (Papava, 2022b).

The global supply chains were interrupted for all kinds of different products. The most important products, affecting not only local but also global inflation were: semiconductors, critical minerals and materials, pharmaceuticals (Marin, 2021a), food products such as oil, wheat and etc. The increase in prices for building materials has caused a "housing bubble" which will unavoidably burst along with the disruption problems settlement (Krugman, 2022c).

Understanding of inflation as a major macroeconomic problem during the coronomic crisis was the reason for the mistake made by central banks all over the world, which becomes particularly acute when the inflation targeting regime is used in the monetary policy pursued by these banks. The disadvantages of this regime were already evident during the global financial and economic crisis of 2007-2009 (e.g., Frankel, 2012; Weber, 2015). Particularly noteworthy is the fact that the weakness of the inflation targeting regime in monetary policy is most apparent in import-dependent countries (Stiglitz, 2008), where the cost of imported products will increase despite the actions of central banks, even more, leading to a price increase also for the local production.

Despite the fact of overall higher inflation pushing societies to criticize the governments, the most problematic aspect became the food price increase in particular, which became especially severe during the coronomic crisis (Ghosh, 2022; Reinhart & Luckner, 2022) topped by the Russia-Ukraine war.

Observations mentioned above, bring the question: are central banks able to effectively manage inflation and control strategic prices, especially the crisis times? Actually, the central banks need to adjust and “align” demand with the reduced supply levels through the instruments at their disposal (Cochrane, 2021). Achieving this is, of course possible; however, the results will be very undesirable as this will further inhibit the already reduced supply growth (Stiglitz, 2022a).

The breakdown of global supply chains is by its nature a deglobalization phenomenon and so the direct link between deglobalization and supply-chainflation is clear (Marin, 2021b). Overcoming supply-chainflation will be possible not simply by the restoration of broken supply chains but rather by an approach developed on the basis of a new understanding of globalization (Rogoff, 2021). In particular, it is noteworthy that in the context of the pandexit, the problem of expanding supply and increasing productivity becomes a main priority for the global economy (Spence, 2022a). Attention should also be paid to the fact that countries developing the real sector of the economy before the onset of the COVID-19 pandemic were better prepared to deal with the difficulties posed by this crisis (Stiglitz, 2022b).

3. The Role of International Action in Inflation Mitigation

Disruptions in supply chains make it obvious that service-oriented and import-dependent, especially developing countries will have to change their approach toward economic policy. However, there is a significant economic risk as well, associated with the supply chain’s increasing complexity (Acemoglu, 2021b). Actually, based on the coronomic crisis experience three main directions appeared within the process of global supply chains formation (Marin, 2021a):

1) Returning productions previously moved out from the country;

2) Creation of additional reserves to compensate for fluctuations in supply chains;

3) Acquisition of resources by firms from different or diversified sources.

Because of the complexity of global supply networks, economies are pushed to develop modest schemes for their smooth operation and effective response to possible fluctuations (Spence, 2021).

The confrontational nature of the modern world economy manifested itself at the beginning of significant difficulties, primarily in the energy (Montgomery, 2022) and food sectors (Farrer, 2022), which ultimately contributed to the emergence of a deficit in the global economy (Kung, 2022). It is no coincidence that because of the shortage, first of all, of food, caused as a result of the confrontational nature of modern global processes, the so-called “Food War” is taking place (Frum, 2022). For the same reason, there is an “Oil War” (Bugriy, 2022). And both of them (food war and oil war), are used as an instrument of the modern political games, forgetting or not taking into account the consequences it may have on import-depended developing countries.

Obviously, the economic sanctions on Russia, provoked the construction of new supply chains, as well as disruptions in existing channels, in order to exclude Russia and Belarus from the already existing ones, i.e., making the issue of foreign trade diversification a part of international agenda (Spence, 2022b). Those supply chain diversifications along with an increase in production costs, in its turn, will lead to even stronger cost-push inflation.

4. Responding the Challenge

The inflationary problem goes to another level when analyzing an import-dependent, so-called consumer economy with an unstable local currency exchange rate (Charaia & Papava 2021). On its turn, the higher inflation itself generates disbelief in the actions of government and democracy (Acemoglu 2021). The current inflationary nature additionally pushes unemployment to increase because of expensive transportation costs and increasing labor costs all over the world, which could cause the trend of quick robotization (Marin, 2021b) and thus more problems in the socio-economic prism (at least in the short run).

Considering all the challenges mentioned above, it was extremely important first to analyze the real cause of the current inflation and its nature, which we already did and at the second stage to respond to the challenge adequately with proper instruments. Here the role of Munflation, imflation and agflation rises.

The agflation (Agrarian Inflation index) observes the price changes for agricultural products which already became problematic not only for the developing, but also developed economies. Studies show that agflation is usually higher than inflation, consequently more important factor in developing countries where food products create around half of the total consumer basket in contrast to developed Western countries where food products make up only less than $1/5^{th}$ of the total basket.

Considering the nature of the current supply-side inflation, it is important to monitor the Import Inflation-Imflation, which could be a great instrument for the central banks in using their instruments and for the governments to create a proper policy against inflation and to support the society according to their needs.

Based on coronomic crisis and Russia-Ukraine war, specific importance should be devoted to the prices on food, medication and utilities, or “munflation” index, invented by the authors (2017), long before the current global challenges added to the old global/local problems of inflation monitoring and using that data for different governmental policies, especially in developing states. Munflation could play a vital role in a deeper understanding of the societal challenges caused by price volatility. At the same, the given index can be used to properly address the challenge and create a problem-solving policy, rather than just temporarily liquidating the negative effects of the problem, with lots of question marks attached.

Thus, inflation modifications such as agflation, munflation and imflation nowadays obtained a much clearer significance, than the simple, old-fashioned inflation indicator (Charaia & Papava, 2017, 2018). The "complex inflation targeting" regime in monetary policy, which gives concurrent consideration to the targeting indicators of inflation and imflation, became much more flexible than the inflation targeting regime and provides clearly better outcomes, especially for the import-dependent developing countries (Papava & Charaia, 2019).

However, despite the inflationary challenge so negatively affecting societies all over the world, potentially leading even to hunger in the least developed economies and significant price increases in most developed economies, there could be some good news as well. In a world experiencing rapid economic, technological, medical, and/or climatic change, we have to distinguish that not all price growths are the same—negative in any way, as it once could be in history, some inflationary processes are even desirable, and even necessary (James, 2021). This process cannot be seen immediately and needs some time (probably several years at least, depending on the business styrle), however afterward could decrease the prices, through increased production, lack of which is the main driver of inflation nowadays.

5. Conclusions and Recommendations

Because of its worldwide scale and the economic crisis level triggered, COVID-19 pandemic has been in the focus of economists and international financial institutions from the very beginning, even creating different interesting acronyms to name the issue.

As a result of supply-driven inflation, central banks all over the world faced challenges they did not recognize so far, at least from the perspective of the actions undertaken. Since the central banks are equipped with the tools to regulate demand-driven inflation, it is essentially impossible for them to impact supply-driven inflation.

The global supply chains were interrupted for all kinds of different products. The most important products, affecting not only local but also global inflation were: semiconductors, critical minerals and materials, pharmaceuticals, food products such as oil, wheat and etc.

On top of Coronomic-related issues, there is no clear vision on the Russia-Ukraine war consequences, which has delivered new problems to the world inflation. The latest outbreak of Russia's war in Ukraine and economic sanctions imposed by the West against Russia and Belarus, further complicated economic problems brought by the COVID-19 pandemic pushing inflation even higher.

Despite the fact of overall higher inflation pushing societies to criticize the governments, the most problematic aspect became the food price increase in particular, which became especially severe during the coronomic crisis, topped by the Russia-Ukraine war.

Disruptions in supply chains make it obvious that service-oriented and import-dependent, especially developing countries will have to change their approach toward their economic policies. Because of the complexity of global supply networks, economies are pushed to develop modest schemes for their smooth operation and effective response to possible fluctuations.

It is no coincidence that because of the shortage, first of all, of food, caused as a result of the confrontational nature of modern global processes, the so-called “Food War” is taking place, for the same reason, there is an “Oil War”. And both of them (food war and oil war), are used as an instrument of the modern political games.

Despite all the negative effects of inflation currently ongoing thought the world, there could be some positive elements in it as well. This process cannot be seen immediately and needs some time, however afterward could decrease the prices, through increased production, lack of which is the main driver of inflation nowadays.

Obviously, the economic sanctions on Russia, provoked the construction of new supply chains, as well as disruptions in existing channels, in order to exclude Russia and Belarus from the already existing ones, i.e., making the issue of foreign trade diversification a part of international agenda.

Based on coronomic crisis and Russia-Ukraine war, specific importance should be devoted to the prices on food, medication and utilities, or “munflation” index. Munflation should play a vital role in a deeper understanding of the societal challenges caused by price volatility.

Munflation can be used to properly address the challenge and create a problem-solving policy, rather than just temporarily liquidating the negative effects of the problem, with lots of question marks anyway. Thus, indicators, such as agflation, munflation and imflation nowadays obtained a much clearer significance.

References

Acemoglu, D. (2021a). The Real Inflation Risk. *Project Syndicate*, July 6. Retrieved from https://www.project-syndicate.org/commentary/inflation-does-not-justify-derailing-recovery-for-workers-by-daron-acemoglu-2021-07

Acemoglu, D. (2021b). The Supply-Chain Mess. *Project Syndicate,* December 2. Retrieved from https://www.project-syndicate.org/commentary/us-supply-chain-mess-incentives-for-offshoring-by-daron-acemoglu-2021-12

Barro, R. J. (2021). Pulling Up the Inflation Anchor. *Project Syndicate*, February 25. Retrieved from https://www.project-syndicate.org/commentary/inflation-threat-us-fed-ignoring-long-term-inflation-expectations-by-robert-j-barro-2021-02

Bugriy, M. (2022). The Oil War: Facing EU Embargo, Russia Targeted Ukraine’s Supplies. *Eurasia Review*, May 20, Retrieved from https://www.eurasiareview.com/20052022-the-oil-war-facing-eu-embargo-russia-targeted-ukraines

-supplies-analysis/

Caselli, F., & Mishra, P. (2021). Inflation Scares in an Uncharted Recovery. *IMF Blog*, October 6. Retrieved from https://blogs.imf.org/2021/10/06/inflation-scares-in-an-uncharted-recovery/

Cassidy, J. (2021). How Republicans are Distorting Inflation and Supply-Chain Problems. *The New Yorker*, November 15. Retrieved from https://www.newyorker.com/news/our-columnists/inflation-and-the-great-global-logjam

Charaia, V., Chochia, A., & Lashkhi, M. (2021). Promoting Fintech Financing for SME in S. caucasian and Baltic States, During the COVID-19 Global Pandemic. *Business, Management and Economics Engineering*, *19*(2), 358-372. https://doi.org/10.3846/bmee.2021.14755

Charaia, V., & Lashkhi, M. (2021). SME Sector Development through Fintech in Georgia. *Globalizafion and Business*, *12*, 179-185. https://doi.org/10.35945/gb.2021.12.025

Charaia, V., Lashkhi, M., & Lashkhi, M. (2022). Foreign Direct Investments During the Coronomic Crisis and Armed Conflict in the Neighbourhood, Case of Georgia. *Globalization & Business*, *13*, 51-56. https://doi.org/10.35945/%20gb.2022.13.007

Charaia, V., & Papava, V. (2017). The Role of Inflation and its Targeting for Low-Income Countries (Lessons from Post-Communist Georgia). *European Journal of Economic Studies*, *6*(2), 96-103. Retrieved from https://ejes.cherkasgu.press/journals_n/1504096069.pdf

Charaia, V., & Papava, V. (2018). Agflation and Other Modifications of Inflation (The Cases of Georgia and Its Neighboring Countries). *Annals of Agrarian Science*, *16*(2), 201-205, https://doi.org/10.1016/j.aasci.2018.04.007

Charaia, V., & Papava, V. (2021). Public Debt Increase Challenge Under COVID-19 Pandemic Economic Crisis in the Caucasian Countries. *Journal of Contemporary Issues in Business and Government*, *27*(3), 18-27. Retrieved from https://www.cibgp.com/article_10671.html

Chikobava, M. (2021). *Metamorphosis of the Monetary Policy of the Leading Central Banks*. GFSIS Expert Opinion No. 173. Tbilisi: Georgian Foundation for Strategic and International Studies. https://www.gfsis.org/files/library/opinion-papers/173-expert-opinion-eng.pdf

Cochrane, J. H. (2021). The Revenge of Supply. *Project Syndicate*, October 22. Retrieved from https://www.project-syndicate.org/commentary/supply-shortages-inflation-result-of-government-policies-by-john-h-cochrane-2021-10

Coyle, D. (2021). The Great Supply–Chain Massacre. *Project Syndicate*, October 15. Retrieved from https://www.project-syndicate.org/commentary/current-supply-shocks-and-2008-global-financial-crisis-by-diane-coyle-2021-10

Davies, H. (2021). The Economic Risks of Pandexit. *Project Syndicate*, September 13. Retrieved from https://www.project-syndicate.org/commentary/post-pandemic-economic-recovery-inflation-risk-by-howard-davies-2021-09?utm_source=Project+Syndicate+Newsletter&utm_campaign=c72b1f49ee-sunday_newsletter_19_09_2021&utm_medium=email&utm_term=0_73bad5b7d8-c72b1f49ee-93567601&mc_cid=c72b1f49ee&mc_eid=e9fb6cbcc0

de Alwis, A. (2020). Coronomics – Plan Your Eggs and the Basket! *Daily FT*, February 25. Retrieved from http://www.ft.lk/columns/Coronomics-%E2%80%93-Plan-your-eggs-and-the-basket-/4-695109

Derviş, K., & Strauss, S. (2020). What COVID-19 Means for International Cooperation. *Project Syndicate*, March 6. Retrieved from https://www.project-syndicate.org/commentary/global-cooperation-can-prevent-next-pandemic-by-kemal-dervis-and-sebasti-n-strauss-2020-03?barrier=accesspaylog

Dilanchiev, A., Aghayev, A., Rahman, M. H., Ferdaus, J., & Baghirli. A. (2021). Dynamic Analysis for Measuring the Impact of Remittance Inflows on Inflation: Evidence from Georgia. *International Journal of Financial Research*, *12*(1), 339-347. https://doi.org/10.5430/ijfr.v12n1p339

Eichengreen, B. (2020). Coronanomics 101. *Project Syndicate*, March 10. Retrieved from https://www.project-syndicate.org/commentary/limits-macroeconomic-tools-coronavirus-pandemic-by-barry-eichengreen-2020-03?utm_source=Project+Syndicate+Newsletter&utm_campaign=cba7e1c6a1-sunday_newsletter_15_03_2020&utm_medium=email&utm_term=0_73bad5b7d8-cba7e1c6a1-93567601&mc_cid=cba7e1c6a1&mc_eid=e9fb6cbcc0

El-Erian, M. A. (2021a). Taming the Stagflationary Winds. *Project Syndicate*, September 22. Retrieved from https://www.project-syndicate.org/commentary/global-stagflation-risk-and-policy-response-by-mohamed-a-el-erian-2021-09

El-Erian, M. A. (2021b). The Inflation Catch-Up Game. *Project Syndicate*, October 21. Retrieved from https://www.project-syndicate.org/commentary/us-federal-reserve-slow-inflation-response-by-mohamed-a-el-erian-2021-10

Farrer, M. (2022). Ukraine War has Stoked Global Food Crisis that Could Last Years, Says UN. *The Guardian*, May 19. Retrieved from https://www.theguardian.com/world/2022/may/19/ukraine-war-has-stoked-global-food-crisis-that-could-last-years-says-un

Frankel, J. (2012). The Death of Inflation Targeting. *Project Syndicate*, May 12. Retrieved from https://www.project-syndicate.org/commentary/the-death-of-inflation-targeting

Frum, D. (2022). The Food War. *The Atlantic*, March 8. Retrieved from https://www.theatlantic.com/ideas/archive/2022/03/rising-food-prices-ukraine-russia-war/626967/

Furman, J. (2022). "Why Did Almost Nobody See Inflation Coming?." *Project Syndicate*, January 17. Retrieved from https://www.project-syndicate.org/commentary/2021-us-inflation-forecasting-errors-economic-models-by-jason-furman-2022-01?utm_source=Project+Syndicate+Newsletter&utm_campaign=45edd33687-covid_newsletter_01_20_2022&utm_medium=email&utm_term=0_73bad5b7d8-45edd33687-93567601&mc_cid=45edd33687&mc_eid=e9fb6cbcc0

Galbraith, J. K. (2021). Whipping Up America's Inflation Bogeyman. *Project Syndicate*, November 19.

Retrieved from https://www.project-syndicate.org/commentary/inflation-not-macroeconomic-problem-for-fed-by-james-k-galbraith-2021-11

Ghosh, J. (2022). The Price Increases that Matter for the Poor. *Project Syndicate*, January 12. Retrieved from https://www.project-syndicate.org/commentary/tackling-the-food-price-inflation-problem-by-jayati-ghosh-2022-01?utm_source=Project%20Syndicate%20Newsletter&utm_campaign=118bd24b14-covid_newsletter_01_13_2022&utm_medium=email&utm_term=0_73bad5b7d8-118bd24b14-93567601&mc_cid=118bd24b14&mc_eid=e9fb6cbcc0&barrier=accesspay

Hannon, P. (2022). Russian Invasion Scrambles Prospects for Global Economy. *The Wall Street Journal*, February 24. Retrieved from https://www.wsj.com/articles/russian-invasion-scrambles-prospects-for-global-economy-11645699066?st=9i0s8557c819q9n&mod=WSJACQ_INT_RussiaUkraine_OPW&fbclid=IwAR3SZ0S9RNiIltk0l4MyGJVuQx9TjCfAN70RS9lDTKmMR4rCli1gx50D0Dc

James, H. (2021). Good Inflation. *Project Syndicate*, June 2. Retrieved from https://www.project-syndicate.org/commentary/good-inflation-price-signals-can-improve-behavior-by-harold-james-2021-06

Krugman, P. (2022a). Inflation and the Power of Narrative. *The New York Times*, January 25. Retrieved from https://www.nytimes.com/2022/01/25/opinion/inflation-economy.html

Krugman, P. (2022b). Wonking Out: Taking the 'Flation' Out of Stagflation". *The New York Times*, July 1. Retrieved from https://www.nytimes.com/2022/07/01/opinion/inflation-fed-stagflation-recession.html

Krugman, P. (2022c). Wonking Out: Are We in Another Housing Bubble? *The New York Times*, January 28. Retrieved from https://www.nytimes.com/2022/01/28/opinion/housing-bubble-us.html

Kung, C. (2022). Bracing for the Era of Economic Shortage. *Eurasia Review*, March 24. Retrieved from https://www.eurasiareview.com/24032022-bracing-for-the-era-of-economic-shortage-analysis/

Marin, D. (2021a). Making Supply Chains More Resilient. *Project Syndicate*, July 27. Retrieved from https://www.project-syndicate.org/commentary/should-governments-help-to-boost-supply-chain-resilience-by-dalia-marin-2021-07

Marin, D. (2021b). Will Deglobalization Fuel Inflation? *Project Syndicate*, November 2. Retrieved from https://www.project-syndicate.org/commentary/deglobalization-wage-price-spiral-in-advanced-economies-by-dalia-marin-2021-11

Montgomery, S. L. (2022). War in Ukraine is Changing Energy Geopolitics. *The Conversation*, March 3. Retrieved from https://theconversation.com/war-in-ukraine-is-changing-energy-geopolitics-177903

O'Neill, J. (2021). The Big Issues for 2022. *Project Syndicate*, December 9. Retrieved from https://www.project-syndicate.org/commentary/financial-markets-trends-to-watch-2022-by-jim-o-neill-2021-12

Papava, V. (2020). Coronomic Crisis: When the Economy is a Hostage to Medicine. *Eurasia Review*, March 29. Retrieved from https://www.eurasiareview.com/29032020-coronomic-crisis-when-the-economy-is-a-hostage-to-medicine-oped/

Papava, V. (2021). On the Correlation Between Pandexit and Crisexit. *Eurasia Review*, October 7. Retrieved from https://www.eurasiareview.com/07102021-on-the-correlation-between-pandexit-and-crisexit-oped/

Papava, V. (2022a). On Sanctionomics. *Eurasia Review*, March 14. Retrieved from https://www.eurasiareview.com/14032022-on-sanctionomics-oped/

Papava, V. (2022b). The Underproduction Inflation: An Acute Challenge for Post-Pandemic World. *Eurasia Review*, February 7. Retrieved from https://www.eurasiareview.com/07022022-the-underproduction-inflation-an-acute-challenge-for-post-pandemic-world-oped/?fbclid=IwAR1GA4IrKY8hc3No1DDsrw6fx271vinRPgYSCr4lC3L4MP3hDPaYmVilrqA

Papava, V., & Charaia, V. (2019). On Complex Inflation Targeting and Modified Inflation Indicators (Experience of Georgia). *Finance: Theory and Practice*, *23*(3), 16-34, https://doi.org/10.26794/2587-5671-2019-23-3-16-34

Pride, J. D., Reynolds, M. T., & Vovk I. V. (2022). Supply-Chainflation. *Glenmede*, January 10. Retrieved from https://www.glenmede.com/wp-content/uploads/2022/01/Investment-Strategy-Notes-01-10-22.pdf

Reinhart, C. M., & Luckner C. G. V. (2022). The Return of Global Inflation. *Project Syndicate*. Retrieved from https://www.project-syndicate.org/commentary/return-of-global-inflation-by-carmen-reinhart-and-clemens-graf-von-luckner-2022-02?utm_source=Project+Syndicate+Newsletter&utm_campaign=ed8a55c22b-sunday_newsletter_02_13_2022&utm_medium=email&utm_term=0_73bad5b7d8-ed8a55c22b-93567601&mc_cid=ed8a55c22b&mc_eid=e9fb6cbcc0

Roach, S. S. (2022). The Fed Is Playing with Fire. *Project Syndicate*, January 24. Retrieved from https://www.project-syndicate.org/commentary/federal-reserve-mad-scramble-to-control-inflation-by-stephen-s-roach-2022-01?utm_source=Project+Syndicate+Newsletter&utm_campaign=76e2607da0-covid_newsletter_01_27_2022&utm_medium=email&utm_term=0_73bad5b7d8-76e2607da0-93567601&mc_cid=76e2607da0&mc_eid=e9fb6cbcc0

Rodrik, D. (2016). *Economics Rules: The Rights and Wrongs of the Dismal Science*. New Yourk: W. W. Norton & Company.

Rodrik, D. (2022). "Inflation Heresies." *Project Syndicate*, January 11. Retrieved from https://www.project-syndicate.org/commentary/correct-policies-to-fight-inflation-depend-on-context-by-dani-rodrik-2022-01?utm_source=Project%20Syndicate%20Newsletter&utm_campaign=118bd24b14-covid_newsletter_01_13_2022&utm_medium=email&utm_term=0_73bad5b7d8-118bd24b14-93567601&mc_cid=118bd24b14&mc_eid=e9fb6cbcc0

Rogoff, K. (2021). Are Inflation Fears Justified? *Project Syndicate*, March 1. Retrieved from https://www.project-syndicate.org/commentary/long-term-inflation-risks-central-banks-globalization-by-kenneth-rogoff-2021-03

Roubini, N. (2021a). Is Stagflation Coming? *Project Syndicate,* April 14. Retrieved from https://www.project-syndicate.org/commentary/stagflation-threat-after-covid19-pandemic-by-nouriel-roubini-2021-04

Roubini, N. (2021b). The Stagflation Threat Is Real. *Project Syndicate*, August 30. Retrieved from https://www.project-syndicate.org/commentary/mild-stagflation-is-here-and-could-persist-or-deepen-by-nouriel-roubini-2021-08

Sachs, J. (2021). US Can Fight Inflation and Still 'Build Back Better.' *CNN*, November 13. Retrieved from https://edition.cnn.com/2021/11/13/opinions/us-can-fight-inflation-build-back-better-sachs/index.html

Spence, M. (2021). Why Are Supply Chains Blocked? *Project Syndicate*, November 3. Retrieved from https://www.project-syndicate.org/commentary/prevent-future-supply-chain-disruptions-using-ai-models-by-michael-spence-2021-11

Spence, M. (2022a). Regime Change in the Global Economy. *Project Syndicate*, January 14. Retrieved from https://www.project-syndicate.org/commentary/global-economy-regime-change-lewis-turning-point-by-michael-spence-2022-01?utm_source=Project+Syndicate+Newsletter&utm_campaign=5ecae9d716-sunday_newsletter_01_16_2022&utm_medium=email&utm_term=0_73bad5b7d8-5ecae9d716-93567601&mc_cid=5ecae9d716&mc_eid=e9fb6cbcc0

Spence, M. (2022b). Will Russia's War Spur Trade Diversification? *Project Syndicate*, March 1. Retrieved from https://www.project-syndicate.org/commentary/russia-ukraine-war-must-spur-europe-energy-diversification-by-michael-spence-2022-03

Stiglitz, J. E. (2008). The Failure of Inflation Targeting. *Project Syndicate*, May 6. Retrieved from https://www.project-syndicate.org/commentary/the-failure-of-inflation-targeting

Stiglitz, J. E. (2021). The Inflation Red Herring. *Project Syndicate*, June 7. Retrieved from https://www.project-syndicate.org/commentary/us-inflation-red-herring-by-joseph-e-stiglitz-2021-06

Stiglitz, J. E. (2022a). A Balanced Response to Inflation. *Project Syndicate*, February 7. Retrieved from https://www.project-syndicate.org/commentary/inflation-causes-and-targeted-solutions-by-joseph-e-stiglitz-2022-02?utm_source=Project+Syndicate+Newsletter&utm_campaign=c7d2aa3fb7-covid_newsletter_02_10_2022&utm_medium=email&utm_term=0_73bad5b7d8-c7d2aa3fb7-93567601&mc_cid=c7d2aa3fb7&mc_eid=e9fb6cbcc0

Stiglitz, J. E. (2022b). Argentina's COVID Miracle. *Project Syndicate*, January 10. Retrieved from https://www.project-syndicate.org/commentary/argentina-covid-economic-miracle-by-joseph-e-stiglitz-2022-01?utm_source=Project%20Syndicate%20Newsletter&utm_campaign=118bd24b14-covid_newsletter_01_13_2022&utm_medium=email&utm_term=0_73bad5b7d8-118bd24b14-93567601&mc_cid=118bd24b14&mc_eid=e9fb6cbcc0&barrier=accesspay

Weber, A. A. (2015). Rethinking Inflation Targeting. *Project Syndicate*, June 8. Retrieved from https://www.project-syndicate.org/commentary/rethinking-inflation-targeting-price-stability-by-axel-weber-1-2015-06

Weber, A. A. (2021). Will Inflation Make a Comeback? *Project Syndicate*, February 17. Retrieved from https://www.project-syndicate.org/commentary/why-covid19-pandemic-could-lead-to-higher-inflation-by-axel-weber-1-2021-02