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Covid-19, Schumpeter and the Size of the Market

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Covid-19, Schumpeter and the Size of the Market

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1. Introduction

At the end of the first quarter of 2020, the global economy was hit by a pandemic which led to state-wide lockdowns and a major economic crisis. Both the supply and the demand sides of economies were severely affected, and global GDP shrank by around 3.5% in 2020 (OECD 2021). International trade fell, global supply chains were disrupted, followed by a subsequent decrease in real output for both small and large countries. To tackle the crisis large scale government interventions followed, targeting both the lack of demand and the supply side. These comprehensive policy packages were designed and implemented with a short-time perspective to provide instantaneous stimulus to the real economy. Within the EU this was made possible by abolishing regulations governing fiscal policies and state aid.

During the Covid-19 crisis governments have increased their expenditures and interventions, paralleled by a decline of the private sector. The crisis also created an impetus for platform firms taking advantage of the transition towards more digital solutions, accentuating the debate of how large tech firms influence competition. More precisely, it has been argued that the dominant position of these firms may over time harm economic dynamism, entry, and innovation.

The economic impact of the pandemic on entrepreneurship has so far varied. Obviously, the initial impact of the lockdowns, the ensuing declining demand, bottle-necks in supply chain etc., meant that businesses could not operate as usual and close downs followed. Other challenges were associated with the regulatory complexities of applying for state support and the ability to retain healthy staff on site or working from home. Yet, after an initial surge in bankruptcies, the massive support measures that were introduced as the crisis aggravated helped firms to survive. In fact, in the US around 540 000 bankruptcies occurred in 2020 as compared to 770,000 cases in 2019. This somewhat surprising effect is likely to reflect that generous government subsidies to firms implied that a number of "zombie" firms managed to survive, despite miniscule long-term possibilities to remain at the market. Hence, "excessive" firm survival rates is not necessarily a good thing as exits are an important part of creative destruction. Entry has also increased in several countries, e.g. in Sweden a 10 percent rise was registered between 2019 and 2020.[1]

Our main objective is to explore how the fundamental changes in the world economy related to the Covid-19 crisis may influence the future size and functioning of markets. The turning points in this pendulum swing, i.e. markets versus public sectors, typically seem to coincide with disruptive events that test the limits of the market and the state. How will governments' retreat look like? Are we entering an era of permanently increased governmental interventions? The outcome relates to the coming redesign of the Maastricht conditions and whether the temporary abolition of state aid rules will be fully re-imposed. But the outcomes also relate to fiscal policies in general and how the expanding public expenditures can be financed, i.e. through taxes or by printing money? Can we expect trade and foreign direct investment to return to previous trajectories or will we see more of protectionism, hidden behind the veil of resilience arguments to guarantee supply chains? Will "buy American" types of campaigns be stepped up and how will trade adjustment mechanisms (tariffs) to limit carbon dioxide emissions be used? To what extent can competition authorities harvest the inherent benefits of digitization without promoting global supremacy to the big tech platform firms? We are particularly interested in the effect of the Covid-19 measures, and their possible extension, on Schumpeterian dynamics, both in terms

[1] This is according to the figures released by the Administrative Office of the U.S. Courts

of entry and exits (Schumpeter I) and how the position of large firms will be affected (Schumpeter II).

The discussion about the size of the market goes far back.[2] Size is defined in several ways in the previous literature, e.g. the numbers of consumers and producers, the regulatory burden, governmental expenditure as share of GDP, or related to economies of scale and trade costs. The political economy literature refers to the night-watchman state as compared to a more comprehensive welfare state, while public interest (Pigou 1938) proponents stress the role of the state for functioning markets. This was later challenged by the public choice school, emphasizing the inefficiencies of regulated markets, rent-seeking behavior and non-transparent structures (Buchanan 1967; Stigler 1971).

We relate the size of the market and its function to the following factors; the extension and development of governmental expenditures, the openness of markets, the level of state aid and the degree of competition at markets. Thus, we address the question of Covid-19 and market size by looking at selective variables on the macro- (fiscal policies/governmental expenditure), meso- (international trade and openness), and the micro-levels (state aid and competition). Even though governmental expenditures and state aid are closely interlinked, we prefer to distinguish between them to emphasize that there is a difference between for instance huge infrastructure projects and cash injections to companies.

The rest of the chapter is organized in the following way. In section 2, we firstly discuss how the governments have responded to the crisis, i.e., what type of government interventions were used as the crisis evolved and how these were funded. Section 3 continues by discussing three threats to the market that originates in policies undertaken during the Covid-19 crisis, as well as proposals to extend and continue some of these measures. More precisely, these threats are related to expanding governmental sectors, the influence on openness, and competition and market concentration. In the following Section 4 we discuss and evaluate the potential strengths and weaknesses with the proposed policies, emphasizing the importance of a balanced redesign of the fiscal framework and state aid rules in the EU. Section 5 concludes and elaborates on how Schumpeterian dynamics has been affected by the Covid-19 crisis.

[2] See for instance Beckmann (2017).

2. Background

During the last two decades, the world economy has experienced three major crises; the 2001 IT-bubble, the 2008-financial crisis and more recently the covid-19 crisis. The former two crisis have had their roots in the financial and real estate sectors (Rheinhart and Rogoff 2009) whereas the covid-19 crisis deviates from this pattern by originating from a pandemic which has impacted basically every part of the economy. Due to the state-wide lock downs which restricted the mobility of individuals and good and services, the supply-side of the economy was hit first. The distortions of the global production chains were then transmitted to the demand side of the economy (Guerrieri et al 2020, Fornaro and Wolf 2020). This is a specific feature of the covid-19 crisis which makes it unique and also implies considerable challenges for public policy.

The impact of Covid-19 quickly became apparent in terms of declining GDP growth and the strains it imposed on public finances. When a country is exposed to a shock of that magnitude politicians will activate whatever available tools there are to stabilize the economy. During the financial crisis 2008-09 monetary policies were primarily used, focusing on lowering interest rates. Since monetary policies are close to, or already in, a liquidity trap (interest rates are close to zero) the measures undertaken in the covid-19 crisis have relied more upon fiscal policy measures as well as a number of other more unconventional policy tools (Braunerhjelm, 2021) in order to uphold demand and facilitate the survival of firms and industries.

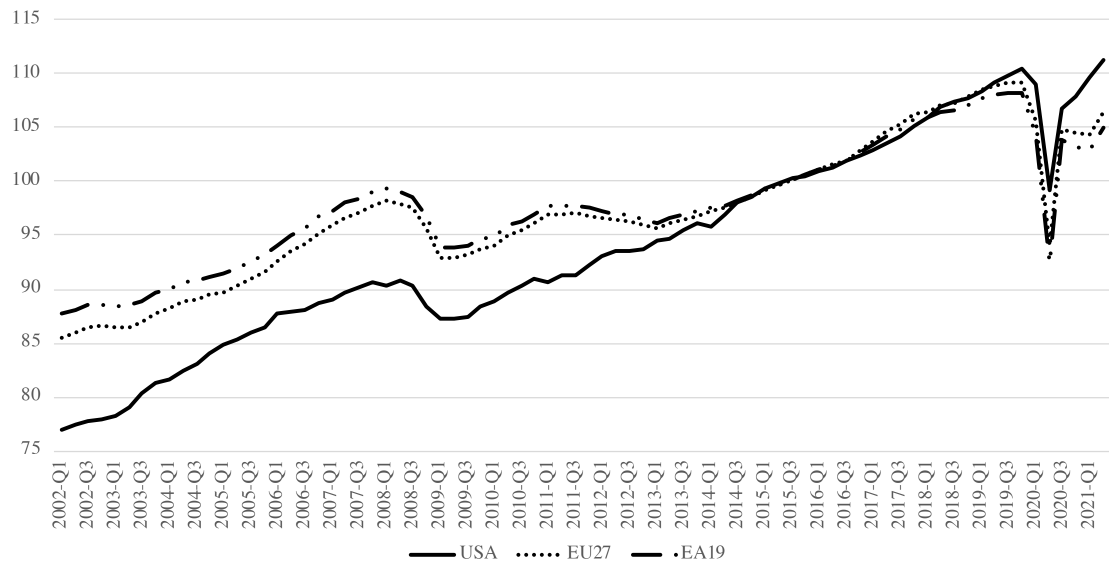
2.1 Some graphic illustrations

The covid-19 crisis evolved rapidly with the spread of the virus leading to large scale lockdowns of regions and entire nations. Graph 1 shows the evolution of quarterly GDP from 2002 to the first quarter of 2021. In the figure GDP is indexed to 2015 and the data is obtained from OECD[3]. We plot the GDP for the US, European Union member states (EU27), and the countries within Euro area (EA19).[4]

[3] OECD (2021), Quarterly GDP (indicator). doi: 10.1787/b86d1fc8-en

[4] The European Union (EU27) countries include 27 member states according to year 2020: Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, and Sweden. Euro area (EA19) countries include 19 countries taken from the 2015 definition: Belgium, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia, and Finland.

Graph 1. Gross Domestic Product (Index 2015=100)



Directly after the first quarter of 2020, the GDP dropped approximately to early 2005 levels in the euro-area. The decline in GDP across the board was clearly larger than during the 2008-crisis. However, the recovery has been fast, and the economies have experienced what is referred to as a V-shaped recovery. The recovery has so far been more profound for the US than for the European region, where the US GDP levels have returned to the pre-crisis levels. Still, the uncertainty about the recovery is high, particularly with regard to the medium and long term, as is the impact of the undertaken policy intervention.

During the Covid-19 pandemic a plethora of policy interventions were embarked upon by governments, e.g., see OECD (2020). Many governments launched short-term stimulus packages such as tax-cuts to individuals and firms and provided state-guaranteed loans. According to the World Bank (2020) approximately 800 different policy instruments have been used to combat the covid-19 induced recession. The European Union has recently decided on expenditures amounting to 2 trillion euro whereof 1.2 trillion is destined for EU’s long-term budget (2021-2027). More than 800 billion euros has been set aside to restore the immediate economic and social damage caused by the pandemic. The main part consists of the 750 billion euros earmarked for the Recovery and Resilience Facility Fund (RRF), targeting reforms and growth enhancing investments in the EU countries. Around 360 billion are loans and 390 billion direct grants. These expenditures at the EU-level are planned to be financed through a mix of revenue at the EU-level and contributions from the Member States based. The European Commission has also already issued bonds to finance the loans to the member states. The EU has also announced that possible future revenues could be linked to a carbon border adjustment mechanism, a digital levy, or the EU Emissions Trading System, and even possibly through a financial transaction tax or a new common corporate tax base.

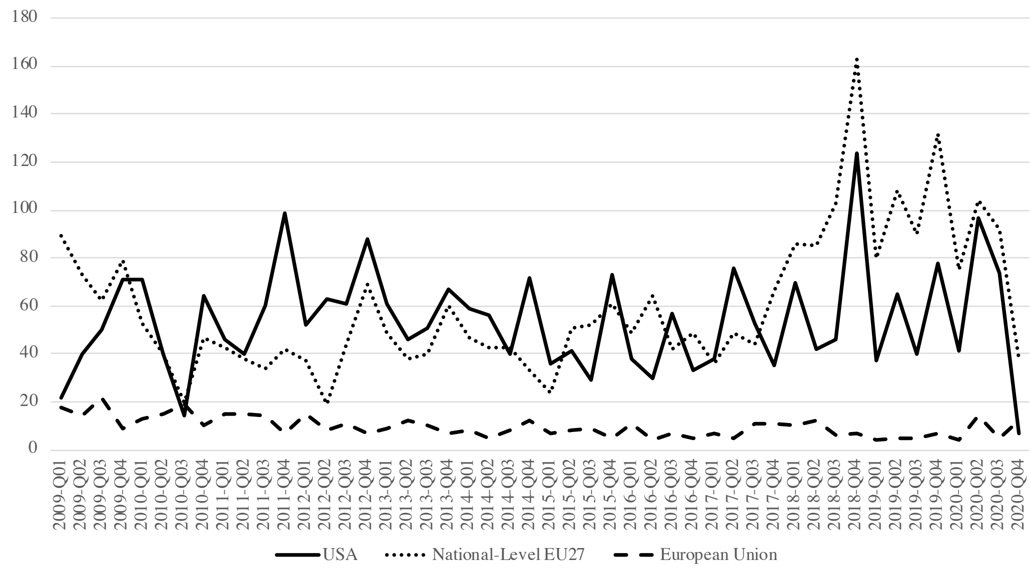
Similar measures to stabilize the economy has been undertaken in the US. For example, the Paycheck Protection Program (PPP) was introduced to alleviate financial constraints for smaller firms while the CARES Acts allocated loans to firms and cash transfers to households amounting to 2000 billion USD. There were also executive orders for example to continue the student loan repayment relief, deferring collections of employee social security payroll taxes, and help households to avoid evictions and foreclosures. The total stimulus packages, including those suggested by the present US administration, are in the range of 20-25% of GDP. The crisis relief packages were largely financed by issuing bonds and borrowing, thus increasing the US debt even further (presently 125% of GDP).

The central banks also had an active role in the covid-19 short-term recovery interventions. The European Central Bank (ECB) for example introduced the Pandemic Emergency Purchase Program (PEPP) which is a 1.85 trillion Euro asset purchase program of private and public sector securities. The program was founded under the Asset Purchase Program (APP) which is included in the non-standard monetary policy measures started by the ECB, since interest rates and required reserve ratio were close to (or at) zero. A similar situation prevailed in the US where for example the federal funds rate was set to a span of 0-0.25%, the cost of discount window lending was lowered, and the FED acquired residential and commercial treasuries and mortgage-backed securities. Thus, central banks did not have access to their standard tools to combat the recession, leading to the experimental asset purchase programs and giving more weight to fiscal policy measures targeting households, firms, state, and local government.

We have information on the number of state interventions through the Global Trade Alert (GTA) database which collects data on state interventions affecting trade in goods and services, foreign investment, and labor force migration. The data provide indication on whether the intervention almost certainly or likely discriminate against foreign commercial interests. In Graph 2 we aggregate the number of such intervention to a quarterly frequency for the period

2009-2020. The number of interventions are separated between the US, the national-level interventions of EU-27 countries, and the European Union-level interventions.[5]

Graph 2. The Intervention Almost Certainly or Likely Discriminates Against Foreign Commercial Interests



In the earlier period, the US government is shown to intervene more frequently the EU countries which, however, was reversed in the period after 2017. As the covid-19 crisis struck in the second quarter of 2020, the number of interventions started to increase at the EU-level, the US, and at the national level in the EU. This was followed by a clear decrease by the end of 2020. What the graph does not show is the magnitude or severity of the interventions. For example, the EU-level interventions are potentially of larger magnitude and affect several jurisdictions, and can have a larger impact on foreign commercial interest than an intervention set by a single country.

As noted above, governments undertook large-scale expansionary fiscal policies during the crisis, mainly financed through increased governmental debts. We have information on the absolute levels of government expenditures for the US and for the European area (graphs 3A and 3B).

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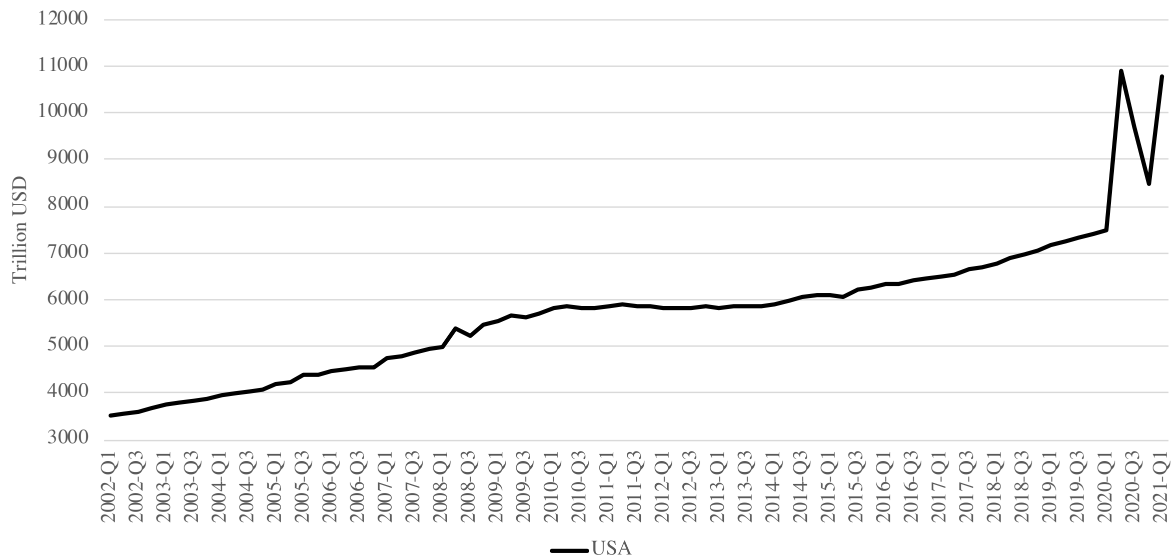
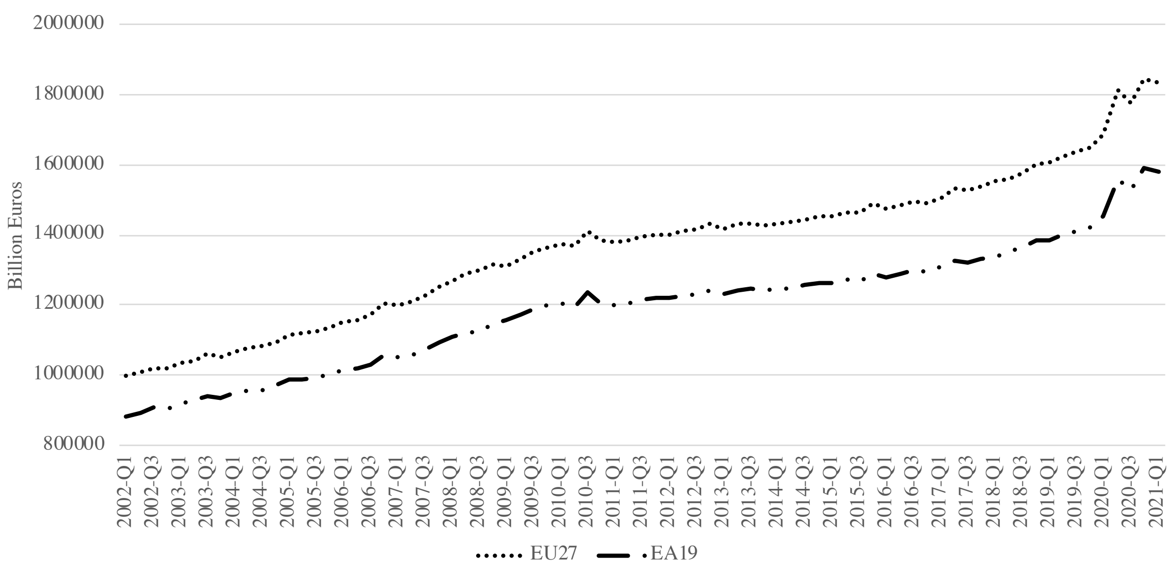
[5] The European Union-level directives and interventions are those commissioned from the EU and usually multiple jurisdictions, i.e., member states, have to integrate them into national legislations.

Graph 3A. Government Expenditure – USA



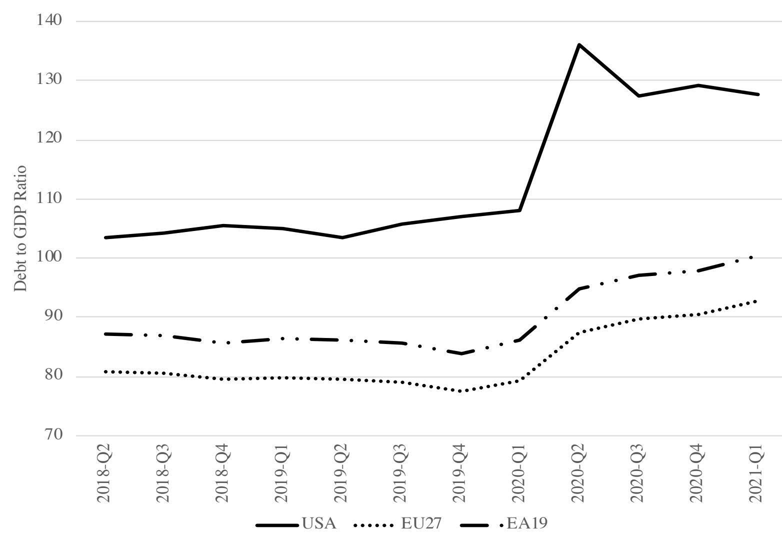
Graph 3B. Government expenditure – EU27 and Euro area



The total government expenditures thorughout the years have been steadily increasing. However, during 2020 government expenditure increased substantially for both the US and Europe. The

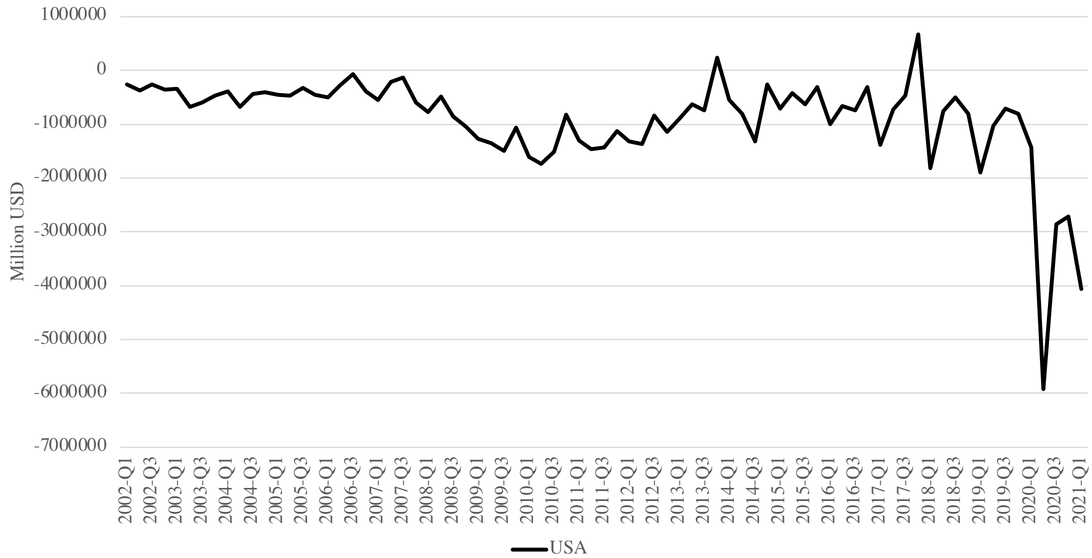
US experienced a dramatic increase in public spending 2020- 2021 due to pandemic related health costs and the massive interventions the government undertook to fight of the economic downturn. These large increases in the expenditure have been financed through debt during the covid-19 crisis. Graph 4 plots the general consolidated government debt as a share of GDP for the US, the European Union member states (EU27), and the countries within Euro area (EA19) for the period 2018 to early 2021. The data is obtained from Eurostat.

Graph 4. Government Debt as a share of GDP

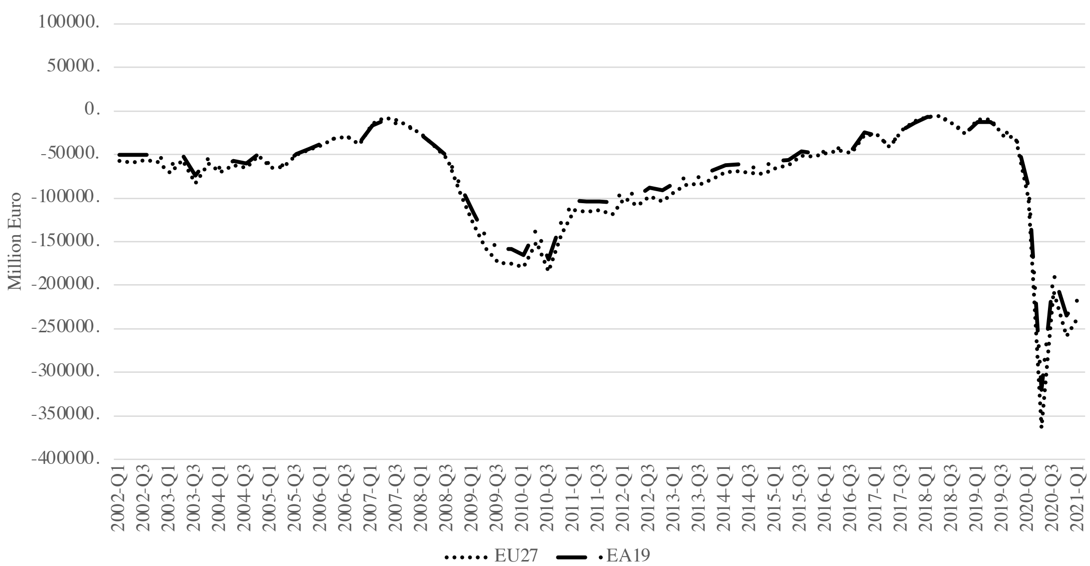


It is well known that the US has had a higher debt-to-GDP ratio than Europe as shown in Graph 4. After and during the second quarter of 2020 there was a large increase in the debt ratio for both the US and the European economies. In that period real GDP also decreased, paralleled by simultaneous and rapid increases in governmental expenditure and debts. Thus, the pandemic had led to weakened public finances within months in most countries, albeit there are considerable country level differences. As a complement to debt as a share of GDP, we present data on the public net lending or borrowing in absolute terms for the US and Europe where data has been provided by Federal Reserve Bank of St. Louis and Eurostat across the years 2002 to the first quarter of 2021.

Graph 5A. Net Lending - US



Graph 5B. Net Lending – Europe



As shown in Graph 5A and 5B during the 2008-crisis there was a large increase in net borrowing in Europe whereas only a modest increase took place in the US in relative terms. The European figures during the COVID pandemic were twice as high compared to the 2008-2009 financial crisis. The immediate jump in net borrowing decreased in the subsequent months after the initial drop. Exactly the same patterns can be observed for the US during the pandemic, but with even larger dip in the new borrowing immediately when the pandemic hit. Overall, the magnitude of the impact of pandemic to public spending and borrowing have been considerably larger as compared to the financial crisis 2008-2009.

Hence, the data reveals that the covid-19 crisis has had a sharp instantaneous effect on the real economy. The severe GDP drop was followed by increased governmental expenditures, rising debt levels in absolute and relative terms. Most economies, particularly the US, have experienced a rather fast rebound of real output which might mirror a more efficient policy-design, at least in the short-term.

3. Three threats to the market economy

3.1 A perpetuating public sector?

As described above, public finances have expanded and become under pressure due to the government responses as the Covid-19 crisis evolved. Extending the observations to all OECD countries for which data are available government expenditures has increased since 2019 while GDP per capita fell.[6] Similarly, the fiscal deficit among OECD countries averaged 3.2% of GDP in 2019 which increased in all countries, exceeding 5% of GDP for 18 countries in 2020. Also, the debt level has risen: among 22 EU and OECD member countries it climbed from about 97% of GDP in 2019 to 115% in 2020, a sizeable increase. Yet, this does not necessarily mean that we will see a gradual return to previous (lower) levels. If you are a proponent of the modern monetary theory, there is no problem with funding deficits by printing money.

In the EU sizeable slippages in the fiscal disciplines have taken place since long, primarily in high-debt countries and mainly associated with current expenditure increases while a very tiny share was due to government investment. According to the Maastricht conditions, or more specifically the Stability and Growth Pact (SGP), countries are required to restrict their budget deficit to 3% of GDP and debt level to 60% of GDP. The number of countries significantly

[6] Data from OECD (2021).

deviating from the rules in 2019 was the highest since the legislative reforms of 2011-2013.[7] Similarly, the size of the deviations was the largest since 2014. In addition, many governments failed to take advantage of good economic conditions that prevailed up until 2019 to build buffers.

As the COVID-19 crisis accelerated, EU experienced its deepest economic recession since the 1930s. That prompted the general escape clause to be activated to temporarily abolish the Maastricht conditions. Massive fiscal expansionary measures were then undertaken in most EU-countries, often exerted in a new and experimental way (Braunerhjelm, 2021). The grand finale of these interventions were the launching of the Rescue and Recovery Fund (RRF), or Next Generation EU (NGEU) initiative, unprecedented in scale and scope (approximately 800 billion euro).[8] The RRF can be described as the first common fiscal policy initiative in EU, i.e. the first attempt to enforce a fiscal capacity to cushion large exogenous shocks while at the same time promoting public investment in growth-enhancing areas (defined as environment, digitization, research and health).

The Covid-19 crisis led to the SGP thresholds being surpassed by most EU-countries. The EU Commission, together with the European Council, had initiated an overhaul of these conditions already before 2019. The discussion on how the future SGP, expected to come into force 2023, should be designed have recently been re-started. Evidently, as many member states will come out of this crisis with historically high debt levels, it is urgent to conclude the SGP reforms process before the de-activation of the general escape clause.

A new framework

The redesign of the future fiscal framework within the EU will impact the potential size of the market. During the present crisis the market has been pushed back due to a general contraction of the economy, paralleled by a massive fiscal expansion. Hence, the level and type of future governmental expenditures that will be tolerated also influences the limits of the market.

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[7] The so-called six- and two-pack that was decided in the aftermath of the financial market crisis 2008/09 in order to improve economic and fiscal surveillance. The six pack is composed by five regulations and one directive proposed to ensure fiscal discipline, targeting expenditure benchmarks, surveillance of policies, etc. The two pack, decided in 2013, focused on budget reforms to increase transparency, enhance coordination in the euro area, and the recognition of the special needs of euro area Member States under severe financial pressure.

[8] The NGEU also includes means for cohesion, etc.

The present situation for most EU-countries, with substantially higher levels of debt, obviously increases vulnerability if interest rates start to rise. This may trigger financial instability and generate shock waves across countries. Such risks are further accentuated by different institutional set-ups among EU-countries regarding governments, central banks, and the financial systems. Moreover, there is a debate within as well as across EU-countries of increasing governmental expenditure to expand welfare schemes and reduce inequality. Growing ideological divisions may in itself distort the possibilities for fiscal stability and generate expansions of the state.

The criticism toward the present SGP focusses on non-transparency, ambiguities, pro-cyclical fiscal effects, declining government investment and difficulties to build fiscal buffers in good times. The call for reform of the current framework is shared by a broad range of academics and institutions, such as the European Commission (2017), the IMF (see Eyraud et al. 2017), the European Fiscal Board (2017, 2019, 2020), the French Council of Economic Analysis (Darvas et al., 2018) and the German Council of Economic Experts (GCEE, 2017, 2018). However, no consensus has emerged to date on how to redesign the European fiscal framework. According to the GCEE, the most recent reforms of the Stability and Growth Pact are steps in the right direction, such as the 'six-pack' and 'two-pack' regulations, and the Fiscal Compact (Feld et al. 2018). Yet, the regulations have become more complex while transparency has been reduced.

The European Fiscal Board (EFB) has in a couple of reports argued for a comprehensive redesign of the fiscal framework while maintaining certain elements such as the debt target even if it presently seems out of range for some countries. The argument is that interest rates on government debt will be more susceptible to increases in the absence of a debt target. Three pillars can be defined in EFB's proposals, allotting some responsibilities to the national governments and other to the EU level:

• EMU needs a permanent fiscal capacity that can be deployed in times of large, exogenous shock. This implies a larger EU budget financed by own tax resources, the capacity to borrow in the event of large shocks, and a focus on EU investment priorities.

• A simpler, more transparent and more effective EU fiscal framework is needed. In addition, country-specific adjustment paths should replace a strict enforcement of "one-size-fits-all" measures, such as the 3% budget deficit rule. A debt anchor should be combined with an expenditure rule designed to take into account country-specific factors to reach the debt anchor. Moreover, a general escape clause is advocated in case of severe crisis situations. To create incentives to adhere to the framework, the fiscal capacity will only be available for those that stick to the rules.

• Finally, growth-enhancing expenditure, i.e. investments, should be excluded from the expenditure rules.

The GCEE also propose that the EU-countries retain a long-term debt limit, such as the 60% threshold in the SGP, and that the government budget should be close to balance over the business cycle. They would however prefer less rigid rules and suggests that the structural deficit does not exceed 0.5 % of GDP over the business cycle, or 1% of GDP if the debt ratio is significantly below 60%. To monitor and synchronize a long-term debt rule and medium-term structural balance, they propose that annual ceilings of governmental expenditures are introduced. In addition, GCEE recommends that certain government expenditures that counteracts cyclical swings are exempted. Overall, the suggestions modify rather than replace the present structure of the SGP.

In yet another proposal formulated by seven French and seven German economist (Pisany-Ferry, 2021), it is suggested that the present sanctions for countries not fulfilling the SGP criteria should be replaced by a debt-corrected expenditure rules, adapted to countries' specific circumstances. Moreover, countries' individual responsibility should increase and no bail-outs (lending to insolvent countries) should be allowed. Simultaneously, measures for risk-sharing (e.g. deposit insurance, "safe assets" and unemployment insurance fund, allowing for debt restructuring), are suggested. A separation between the role of watchdog/surveyor and the role of political judge is also recommended.[9]

Blanchard et al. (2020) claim that the present structure of SGP is insufficient to protect public investment simultaneously as it excessively constrains the use of fiscal policy for output stabilization. Based on that observation they present a policy package relatively similar to EFB's:

[9] De Grauwe and Ji (2018) argue that it is impossible to decide whether a government is actually insolvent and that the very existence of a sovereign restructuring procedure may trigger panic.

- EU should shift from fiscal rules to enforceable fiscal standards. The low interest rate regime, the complexity arising from constraints on monetary policy, combined with higher Knightian uncertainty all indicate that quantitative measures should be substituted for more qualitative assessments combined with ex-post assessment mechanism.
- Governmental expenditure should distinguish between current expenditure and investment expenditures, i.e. introducing a capital expenditure budget. It requires a common definition of capital among EU-countries and a monitor mechanism at the EU level.
- A fiscal mechanism should be implemented to counteract shortfalls of demand at the EU level. It should be able to borrow at the EU-level and engage in expansionary fiscal policies.

Finally, there is also an ongoing discussion within the Commission. Paolo Gentiloni (European Commissioner for Economy) has recently aired the need for a far-reaching legislative overhaul to help drive stronger public investment and growth (Financial Times, 2021a). He argues for a structure that incentivize public investment in the green and digital transitions, while fostering stability and durable economic growth. Furthermore, in concert with EFB, he stresses simpler and more flexible rules, including an "expenditure rule" that sets a ceiling on the growth rate of nominal public spending to avoid repeating the aftermath of the financial crisis, when net investment drifted rapidly lower, stymying growth. Some growth-enhancing expenditure may also be excluded from the ceiling on spending growth. Gentiloni represents the fraction of EU-countries that favors stronger political clout at the EU-level while the northern countries within EU are more skeptical and considerably more frugal.[10]

3.2 Covid-19, state aid, and competition

As the width and effects of the Covid-19 crisis became apparent, the EU fiscal framework conditions referred to above were put on hold. Similarly, the regulatory framework on state aid was basically abandoned until 31 January 2021. That allowed interventions and subsidies

[10] Also, Janet Yellen, US Treasury secretary, advocates a framework that enables more stimulus measures in case of crises.

targeting firms directly, normally only allowed for limited causes (e.g. R&D), to certain firms (SMEs) and within certain thresholds. Drect capital injections to companies (up to 800,000 euros per company) was allowed, and was the provision of government-guaranteed loans (90 percent) with subsidized interest rates (six years), deferral of taxes and pay-roll fees, and wage subsidies (redundancy/furlough wages).[11] These provisions were combined with setting up governmental funds earmarked for innovation, venture capital, etc.

Hence, the abolition of both the Maastricht condition and temporary dismissing state aid rules made massive interventions to individuals, firms, industries, and sectors possible. Such support emerged in a plethora of different forms (Braunerhjelm, 2021). At the time most of these measures were probably motivated, the issue now is their long-term effect on competition and the functioning of markets.

Some countries are more comfortable with more generous state aid and also favor more interventionistic industrial policies, e.g. creating national or EU champions.[12] Others would strongly object. Hence, just as in the case of the Maastricht conditions, it is not given that future state aid rules will be identical to those put on hold in 2019. There are advocates of permanenting certain types of micro-level support, implying that a wave of new regulations and support structures may be imposed. This may incur negative effects on long-run competition, spilling over to innovation, growth, and prosperity.

In addition, the last few decades have witnessed the emergence of digitized production technologies and new business models, a trend that has been reinforced during the present crisis. A conspicuous phenomenon is the emergence of platform companies, often global, which have had considerable positive consumer effects in the short run, while the long-run welfare effects have been increasingly questioned (Cremér et al., 2019).

How to regulate competition

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[11] The conditions are that companies receiving support have had a financially sound position in 2019, that loans and guarantees do not exceed twice the wage cost or 25 percent of turnover and that liquidity strengthening measures apply for a maximum of 18 months for SMEs and 12 months for larger business.
[12] Some changes have already been decided, e.g. regarding regional support.

The overarching conditions for fair and competitive markets are contingent upon an institutional framework based on the rule of law, a credible judicial system, impartial and unbiased regulations and limited governmental interventions that do not distort markets. In addition to these overall conditions, there are regulations and legislation that directly targets competition.

The United States was the first country to impose a competition law (Sherman Act, 1890) that made it possible to break up larger companies. It was followed a few years later by the Clayton Act (1914) which prevented anti-competitive company acquisitions. The reason for the Sherman Act was the extremely strong market position of Standard Oil, significantly more dominant than today's large platform companies (measured as profit shares). After the legislation, the company was broken up into 34 parts that continued to be very profitable. One of the concerns had to do with company's extensive power and political influence, which partly resembles today's situation (Braunerhjelm, 2017).

Views on how competition should be regulated have varied over the decades. Pigous' (1938) work on public interest theory constitutes a starting point. The idea was that unregulated markets would lead to market failures which must be rectified through political intervention. This was questioned much later in the so-called public choice theory, which instead emphasized the negative effects of weak ownership and the risk that arises in organization where agency structures open up for opaque behavior drive by individuals' preferences. Similarly, different stakeholders may try to control or influence how regulations are formulated (Stigler, 1971).

Regarding competition, a group of academics at Harvard developed a theory in the 1950s about the design, functioning and efficiency of markets that had a major impact. The analysis was based on firms producing a well-defined product that could be linked to a specific market where a number of firms compete. The focus of the analysis is the competitive relationship between the producers in this market, i.e. number of companies and market shares so that no firm dominates the market.

Later, this view was challenged by the so-called Chicago school, which is based on assumptions about efficient and rational markets that also have a self-correcting function. In the short-term efficiency reasons and consumer benefit can justify a higher degree of market concentration (referred to as efficiency defense). A lower competitive pressure at times is argued to be compensated for by economies of scale, lower prices, and a better adaption of services and products to customers and producers. The conclusion was that regulations of competition should be limited, and dominant companies can be allowed, at least as long as there is a change of market leaders. The Chicago school thus advocated a more dynamic view of market competition where the number of the company itself was not decisive (static view).[13]

The current framework on competition draws on the Chicago school but has recently been increasingly questioned due to digitization and the emergence of platform firms. The cornerstones of current regulations of competition refer to the abuse of market power, mergers of firms (given certain turnover thresholds) and different types of collusions (prices in particular), and whether that generated harmful effects on consumers, primarily through price increases. However, in the platform economy, it may be considerably more intricate to verify that harm has been inflicted upon consumers, especially in the short run, since services are often free. Instead, other potentially negative effects of platforms have increasingly been emphasized, such as deterring entry and innovation. This has sparked efforts to adjust institutions to incorporate the specific characteristics of platform firms and their potential future impact on industrial dynamics.

The platform economy and competition

Digitization was initially expected to lead to stronger competition by, among other things, facilitating entry of a large number of companies. However, reality was shown to be more complicated, which is perhaps most clearly illustrated by the so-called platform companies. Given that a number of such companies have quickly established themselves as global market leaders in their respective industry, it has been increasingly questioned whether the current regulations are sufficient to ensure fair competition.

Moreover, platform companies have gradually expanded their domains to other markets by bundling products or making access to services conditioned on the usage of other services provide by the platform (e.g. travel and payment services), and by developing a significant number of ancillary services, i.e. an ecosystem of complementary services. In addition, the platform

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[13] See Piraino (2007) on the development of competition law.

companies often have a "gatekeeper function" implying that they decide who can use the platform and on what conditions. Hence, doubts have been expressed whether competition between platforms, as well as on these platforms, actually work.

Obviously considerable positive values have been created by platform firms benefiting consumers, producers, and entrepreneurs. The issue is how to regulate competition in order to ensure a continuation of these beneficial effects. The combination of significant economies of scale, strong positive network effects, negligible marginal costs, and exclusive access to large amounts of data, can be expected to affect the competitive conditions over time. Such market characteristics implies that there is usually only room for one or a limited number of companies, i.e. a “winner-takes-most” economy. “Tipping points" might be reached where platform companies gain such a dominant position that entry of new firms is virtually impossible The long-term negative welfare effects of these concentration forces risk exceeding the short-term efficiency gains, leading to more concentrated markets (Furman et al., 2019; Scott et al., 2019).

Similarly, the advantage of data access implies that platform owners may influences users' behavior through various types of smart algorithms that "nudge" them in the desired direction. These forces accumulate as the platforms grows and may in the long run stifle competition, innovation, and negatively affect consumer value. This suggest that policies must pre-empt potentially negative future effects on competition.

An increase in market concentration can also be observed since some time, being particularly accentuated in the U.S. and embracing most industries (Phillipon, 2019). In Europe that pattern looks somewhat different. Likewise, a decline in new ventures has been observed in several countries, particularly in the U.S. (Decker et al., 2016; Naudé, 2019), adding to the worries of languishing economic dynamism.[14] Hence, both the size of the market and its functioning may be threatened if the competitive forces are reduced (Acemoglu and Restrepo, 2018).

Not only a dominant position but also acquisitions may hamper competition and strengthen incumbents’ market position. This can justify very high prices despite low sales in the acquired company. Such early "killer acquisition" was first observed in the pharmaceutical industry where

[14] To what extent firms in the gig and sharing economy is included is unclear. These firms may be registered differently and therefore not show up in the statistics, at least in European countries.

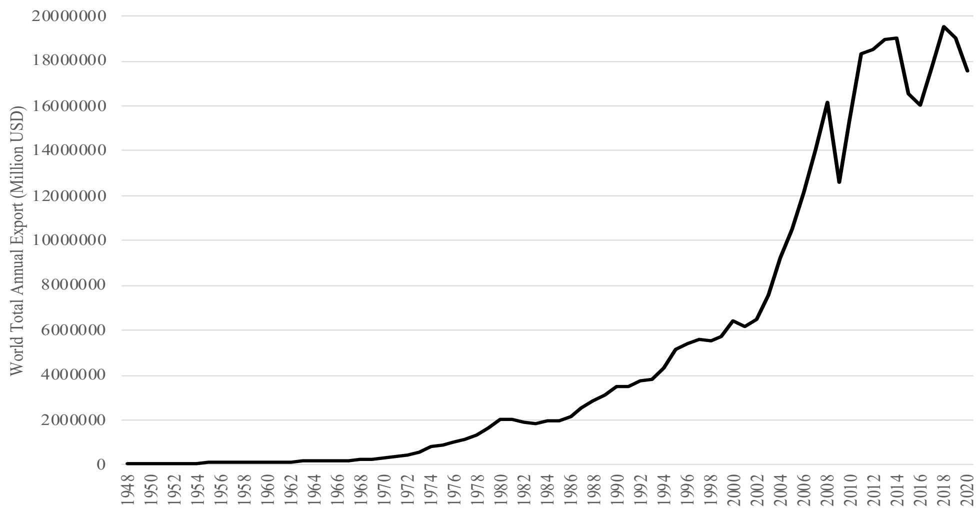
the purpose was to kill an innovation (a new drug) in the acquired company or to integrate it into the acquirer's own product portfolio. Since then, the concept has been extended to especially digitized markets and partly recast into a "kill zone". If you get too close to the core business of an existing firm, you risk being liquidated through acquisitions. Of course, an acquisition does not need to be negative if, for example, there are clear synergies or if efficiency and user benefits increase in other ways.

According to present EU and US regulations, acquisitions and mergers must be prohibited if they lead to significant impediment to effective competition. However, many acquisitions go under the radar because they do not meet the turnover requirements for a review to begin, even though the company may have a large and growing group of users.

3.3 Covid and openness

During the last decades, the world has become increasingly inter-connected. The interlinked value-added production chains still account for approximately 70 percent of world trade. The inter-connectedness comes in terms of mobility of information, labor, capital, and goods and services. In many areas in the past, countries have liberalized their trade policies and taken part of the world trade at an increasing rate. However, in more recent years, some of the public and policy sentiment have been re-directed to more protectionism which has led to increases in tariffs, Brexit, and other national protectionist measures being taken place. Graph 6 below shows the volume of world trade since 1948 obtained from WTO.

Graph 6. World trade (in Million USD)



In the early 2000s, global trade increased substantially as countries become involved in the world economy and integrated in global production chains at a new pace. A setback occurred after the 2008-2009 crisis, but it bounced back to an even higher level in the preceding few years. Following the recovery, international trade stagnated and there was even a dip during the 2015 to 2016 period. In the early months of the covid-19 crisis, total global trade volumes decreased by around 17 percent and the decline in 2020 averaged about 8 percent. Global trade, similar to GDP, has however recovered faster than initially expected. A conspicuous feature of previous crises has been an initial decrease in demand which then transcended into a decline in trade. In the present Covid-19 crisis this was reversed, and world trade was first impacted through disruptions on the supply side due to lockdowns and other regulatory restrictions which hindered imports and exports.

Later in the crisis, the situation was followed by some countries prohibiting exports of vaccine. Such national measures to shield the own population may set a viscous cycle into motion, characterized by escalated protectionism, global inefficiencies in production. Rents would be created - due to the lack of global competition - and shifted to national players.

High levels of inequality have also been claimed to be fundamental factor undermining global trade and igniting political conflicts. Inequality within countries is thus central to understand long-term trade relationships and the strain that trade is placing on domestic policies. Addressing inequality within and between countries implies that the corresponding savings gluts and international (trade and financial) imbalances needs to be attended. Hence, surplus countries have to consider measures to increased demand. 'De-globalization' has become a buzzword, but that would imply creating rents and new types of inequalities where some national businesses would benefit at the expense of consumers.

A particular concern in international trade has to do with resilient supply chains where it has been argued that governments should subsidize production of strategically important components (e.g. semiconductors). Others argue that we should separate between globalization leading to global public good, such as handling climate change or pandemics, and 'beggar-thy-neighbor' policies, such as with tax competition. Yet other studies confer a positive and strengthening effect of trade on the resilience of supply chains. Outsourcing generally increases the scale of intermediate input production with leads to increased productivity.

4. Discussion – What to expect?

We have discussed three potential forces that have been accentuated during the Covid-19 crisis that may threaten the future size and functioning of the market. Besides of those there are of course a number of other potential factors that may circumcise the market. The combination off geopolitical tensions, climate induced conflicts and more generally tendencies toward protectionism, implies that the market-based economy cannot be taken for granted. In addition, there is a strong political movement in several countries for increased governmental expenditures to overcome inequalities and expand social services.

4.1 The size of governments versus markets

Regarding the role of governments and the risk of continued and increased governmental interventions, we believe that the expansionary fiscal policies during the crisis, combined with low interest rates, constitutes an irresistible temptation for a large group of politicians to continue on that path. That may however well be "a road to hell paved by good intentions". In the US the discussion seems to primarily have centered around the effect of expansionary policies on future inflation, interest rates and crowding-out effects. In the EU, the question concerns the reform of the entire fiscal framework as outlined in the Maastricht conditions.

As regards the latter, and based on the discussion referred to above on how to reform the SGP, we would emphasize the following aspects:

- Before any extension of governmental expenditures can be considered, make sure that the current levels of tax revenues are spent in an efficient and rational way. For instance, a large chunk of the EU-budget is still allocated to the agricultural sector, often without taking for instance growth or climate effects into account.
- Make sure that fraud and corruption in using present EU-level resources are, if not extinguished, at least minimized. This has to do with credibility and legitimacy.
- We would recommend to abstain from a fiscal mechanism based on a new level of taxes collected at the EU-level. Once taxes have been delegated to the EU-level, they are likely to increase and expand to new areas. That may hamper confidence in the EU project and generate an excessive regulatory burden.
- We are skeptical to abolish debt anchors or budget rules but agree with the need to adjust the compliance rules such that country-specific circumstances are taken into account. Transparency and simplicity should be prioritized.
- Similarly, we believe that separating the budget between current expenditure and investments is a good idea. However, it would require a stringent framework and distinct assessment so that expenditures are not redefined as investments (e.g. with regard to human capital).
- It seems difficult to accomplish independent and credible assessment of nations' compliance with fiscal regulations, moral hazard risks will be present. Previous attempts to stricter rules and enforcement have come at the expense of increased complexity and practical implementation problems.
- Some of the recommendations launched by different organizations or scholars may be hard to reconcile with the principle of subsidiarity. There is already a discussion of the EU meddling into policy areas that best can be handled at the national level.

Hence, we advocate caution in imposing new and detailed regulations regarding EU's fiscal framework. The only proposal that seems likely to strengthen the market and contribute to its expansion is the investment proposal. Partly because it would engage private actors, partly because if correctly designed it would strengthen the growth prerequisites. Installing a so-called fiscal mechanism, combined with taxes at the EU-level, is motivated by the inability of national governments to build up buffers in good times. Institutionalizing a responsibility for fiscal policies, besides of what is already possible, may however further reduce the incentives at the national level to safeguard public finances and can open up for moral hazard behavior. This is likely to have a detrimental effect on the functioning and size of markets.

4.2 Covid-19, state aid and competition

Turning to state aid the temporary moratorium, or redefinition, of the present rules is supposed to end on 31 December 2021. There are however suggestions from different stakeholders and policy sectors that the rules should be reformed to allow a more active industrial policy. To the best of our knowledge this has not yet resulted in any concrete measures to change the current system, besides of some relatively minor changes related to regional policies. Since countries within EU have different traditions and tolerance when it comes governmental interactions with the business sector, a softening of state aid rules is likely to distort market competition, diminishing the room for market expansion and market dynamism.

That brings us to the important issue of the functioning of the market as such, i.e. competition rules, which recently has become a highly topical issue. Pivotal in that discussion is digitization and the emergence of big tech platform firms. The question is what the future implications are of their dominant position, network externalities and access to data. Our conclusion is that digital markets will only work well if they are supported with strong pro-competition policies that open up opportunities for innovation and counter the forces that over time can reinforce higher concentration where industries are dominated by a one or a few firms. The challenge is therefore to reach a balance between i) companies that build platforms and invest in data collection, ii) their market position and effects on competition, iii) the interest of users of platforms on the other hand (switching platforms, transfer data, integrity, etc.).

These potential problems for well-functioning and expanding markets in the longer run have recently received considerably more attention in both the EU and the US. In the US, the House of Representatives presented a report on the effects of Facebook, Apple, Amazon, and Google on competition in October 2020. According to the report, all these companies have abused their dominant position in terms of fees and prices, contractual relationships, and competition on the platforms. In addition, the companies have made more than 500 acquisitions since 1998, none of which have been stopped by antitrust legislation.[15] Moreover, there are presently two legal actions going on in the US, involving Facebook (the Federal Trade Commission) and Google (Department of Justice), whereas Apple just lost a case regarding their right to preclude information where app contents can be downloaded free or at lower costs.

The European Commission has been involved in a number of noticed legal cases on competition with the big platform firms, with varying success. The Commission has also proclaimed the 2020s as the "digital decade" with a focus on an independent digital agenda where data, technology and digital infrastructure are at the forefront. The work is built around four pillars; Technology that serves the EU population, a fair and competitive digitization an open, democratic, and sustainable digitization and that the EU takes the lead globally. The two main policy documents proposals are the Digital Service Act (cyber security, integrity, responsibilities, etc.) and the Digital Market Act (platforms, competition, entrepreneurship, etc.)

We sympathize with views forwarded by Furman (2019), Aghion et al. (2021), Phillipon (2019 and Cremer et al (2019), too mention a few. Hence, market abuse cannot solely be determined by looking at prices. Data portability, interoperability and sharing is critically important for users and new platforms. The gatekeeper position has in several cases rendered anti-competitive practices. Short-run consideration (prices) should be replaced by assessments of the long-run effects on competition, prices, and innovation. Moreover, the entire ecosystem and their vertical structures should be included in the analysis of potential impediments to competition.

Similarly, the effect on competition of mergers cannot be based on turnover thresholds, since that does not take into pre-emptive mergers or acquisitions done to disarm potential future competitors (e.g. Facebook acquiring Instagram and WhatsApp). Anti-trust regulations should be considered to diminish market power of a few firms.

Pro-competitive tools, i.e. ex ante measures, should to a larger extent complement ex post actions to facilitate for new businesses to enter digital markets and increase predictability to all

[15] In 2020 the big platform firms' acquisitions reached an all-time high (data from Refinitiv, see Financial Times, 2021b).

companies about the rules and standards that apply. This is likely to spur innovation and provide consumers with higher quality and greater choice (Furman et al, 2019). In addition, it could replace large fines and drawn-out procedures and enable faster action that more directly targets and remedies the problematic behavior.

There is nothing inherently wrong about being a large company, in fact is necessary in order to reap the advantages of economies of scale, which may increase efficiencies and benefits for consumers or businesses. But regulations have to be designed such that long-term user welfare, entry and innovation is preserved in order for markets to function and grow.

4.3 Covid-19 and openness

An arms race-type of behavior where different countries engage in protectionist measures to secure national interest against foreign will be a costly strategy, not only in the short-run but also in the medium- and long run. If these sentiments persist, it may even lead nations to exit institutions such as European Union or trade agreements. In the case of Brexit, at least the short-run costs seem to have been quite extensive measured as a decline in investments more generally, relocation of firms and disruption in supply chains.

If protectionist measures accelerate and become permanent, the absence of foreign competition can be expect to lead to increased sizes of domestic firms, combined with less productive firms surviving for longer and an overall more inefficient production structure. Similarly, a continued decrease in foreign direct investment would also hamper competition and productivity. [16] This means that the closing down of borders and trade can have fundamental effects on the structure of the firms in a market.

Also restrictions on the mobility of individuals will have negative effects over time. Besides of certain industries being particularly hurt, hindering mobility of individuals implies that embodied knowledge will not be diffused to the same extent. Hence, mobility of individuals would be beneficial not only to certain industries but also the exchange of idea and thus innovation.

[16] Foreign direct investments fell by a third during 2020.

5. Concluding remarks

Covid may expand or decrease the potential size and functioning of the market. This entirely depends on the policies taken and for how long they persist, and the political reactions to the crisis. If market imperfections or market failures prevail, policy interventions are justified to correct such deficiencies. In the case of Covid-19, the logic was almost reversed, i.e. policy measures implied that markets ceased to function, which is obvious when a lock-down is imposed. Then the state can be argued to have a responsibility to cushion and bridge such situations until markets can open up again, which prompted a number of government interventions during the Covid-19 crisis. As the recovery of the economy has gained speed, the stimulus packages and crisis induced regulations should be withdrawn, since they may otherwise have unintended, long term impacts on markets and how they function.

From a Schumpeterian perspective, the question is whether and to which extent dynamics and creative destruction forces have been affected by Covid or if there are risks for a more persistent post-Covid malaises? We have tried to assess that by taking a selective look at actual and potential interventions at the macro-, meso- and micro-levels, being relevant for our purposes. The macro-level refers to the size of public expenditure which basically determines the overall room for market-based activities and shapes the role of the public sector in an economy. Presently the situation is characterized by considerable uncertainty about the future role of governments and the instruments available, particularly in the EU. Proponents of the modern monetary theory, as well as those stressing more interventions to reduce inequalities, claim that fiscal expansions can be financed through printing new money without no or negligible negative effects. Hence, pursuing that view means that there is basically no financial constraints on the public sector, except political.

We have illustrated the interventions at the meso-level with the direction international trade and openness has taken. It could however also have been policies targeting the industrial level, which have been frequent but less transparent. We concluded that after an initial surge in protectionist measures there seems to be a return to business as usual. Yet, it depends on the design of future state aid policies as well as possible erection of non-tariff barriers and tariffs, the extent to which resilience in supply chains and mitigation in carbon dioxide emissions are used as general reason to shield domestic markets from foreign competition. An excessive use of such instruments risk to stifle economic dynamism and the functioning of markets.

Finally, at the micro-level we were concerned about the long-term effect of massive state aid and faltering competition regulations. We would claim that continuation of those risk infecting Schumpeter I with serious post-Covid symptoms, irrespective of data showing higher entry and fewer bankruptcies in 2020. The reason is that different kind of support to firms is likely to have kept zombie-firms with no or small long-term for survival on the market. Schumpeter II seems less affected, rather the dominance of large platform firms has thrived during the pandemic. This is however not a desirable outcome and may have severe long-term implications for entry and innovations. In addition, if government intervention continues it might push back the private sector even further, giving large firm an advantage handling and interacting with governments. Hence, the “wrong" Schumpeter seems to have benefited from the Covid crisis so far.

Still, governments and policy-makers are usually laggards when markets change. It is primarily private firms and individuals that exploit new technology and contributes with innovations that reshapes the frontiers of the pre-requisites for markets. Hence, the outcome is far from given even if we presently see growing public sectors and an increased rate of interventions.

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