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Competition and Inflation – Note by the European Union

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More documents related to this discussion can be found at www.oecd.org/competition/competition-and-inflation.htm

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1. Introduction

1. In this short note, we address three main questions. Firstly, is the current episode of high inflation rates a (partial) result of industrial concentration? Secondly, while remaining agnostic between the causal link between concentration and inflation, does concentration i9ncrease or decrease the impact of demand or supply shocks? Finally, what, if anything, should competition policy do differently in periods of high inflation.

2. As explained below, we do not believe that an increase in market concentration can be blamed for the current high levels of inflation. Not only is there essentially no correlation between market concentration and inflation over time, across countries or across sectors, but the rate of price increase currently observed simply cannot be accounted for by any change in market structure, however drastic.

3. The link between increased concentration and competition policy enforcement is itself tenuous. It is however well-known that market power can magnify or dampen the effect of external shocks on prices. However, the type of external shocks observed over the last two years and their timing are not compatible with the resulting pattern of inflation. This does not mean that Competition Policy cannot provide some help in bringing inflation back to more tolerable level.

2. Increasing Market Concentration

2.1. Concentration

4. There have been widespread and well-documented claims that industrial concentration has been increasing in both the US and the EU over the last twenty years.[1]Still, it is worth remembering that doubts remain. The main reasons for the residual scepticism relate to how the data available are used. For example, Kalemly-Ozcan et al. (2020) argues that if data from the much used Orvis data based are handled correctly, the recent upward trend in concentration disappears. A second issue is the delimitation of markets. The empirical papers cited use sectoral data. These sectors, however finely defined do not correspond to antitrust markets, i.e. they do not regroup sets of companies that actually compete with each other.[2]

5. There is also disagreement as to the mechanism involved. It is only if higher concentration leads to higher prices that it might have any direct link with inflation. However, greater concentration can also emerge because increasingly efficient companies drive out less efficient competitors. In this case, higher concentration should lead to lower prices.

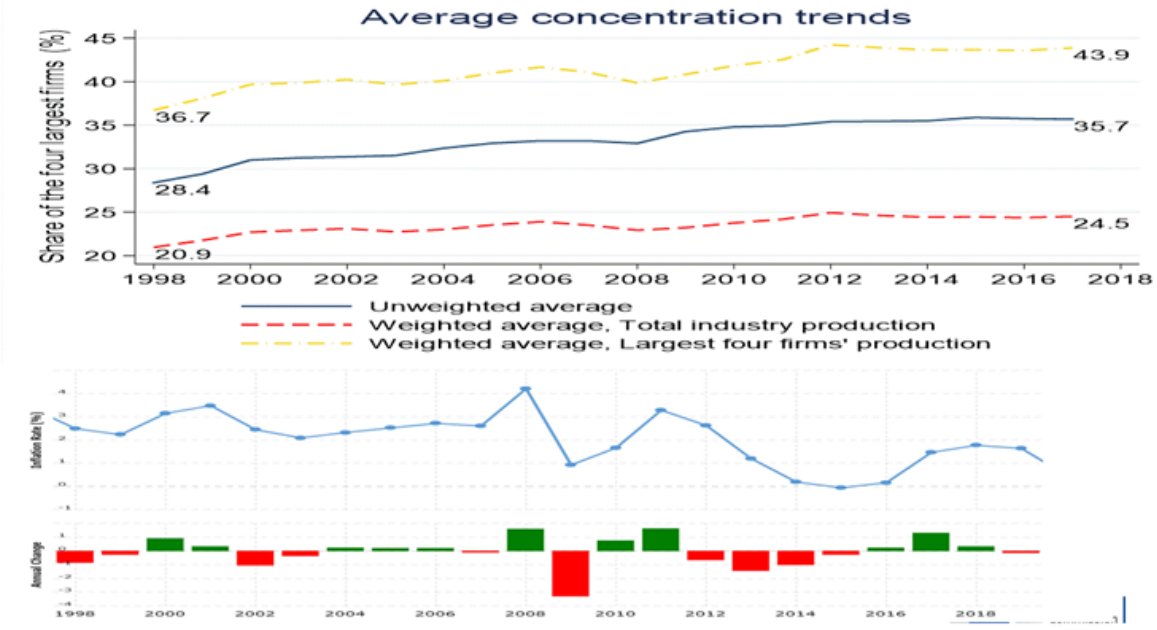
6. It is also important to understand that industrial concentration and inflation are very different types of economic phenomena, making it a priori unlikely that they would be

[1] See Klotay, G., S. Lorincz and T.M. Valletti (2022) for a summary of the literature and a recent analysis for the EU. Also see Affeldt et al. (2021), Akcigit et al. (2021), Bajgar et al. (2019), De Loecke and Eeckhout (2018), Guttierez and Philippon (2020).

[2] See Werden and Froeb (2018), but also Affeldt et al.

intimately linked. First, inflation is a *rate* of change, i.e. for a given rate of inflation price levels keep increasing forever. By contrast market structure is a state variable: higher rates of concentrations are typically associated with higher prices and lower levels of innovation but, once market structure has stabilised, there are no reasons to expect either prices or innovation to keep changing. Inflation and market structure also have very different consequences on the real economy. Per se, inflation does not need to affect real wages, investments, or the distribution of income. With perfect expectations and full indexation of everything, no real consequences from inflation would be expected. By contrast, an increase in market power leads to increases in *real* prices (say compared to wages) and tends to redistribute income from consumers (and possibly workers) to shareholders.

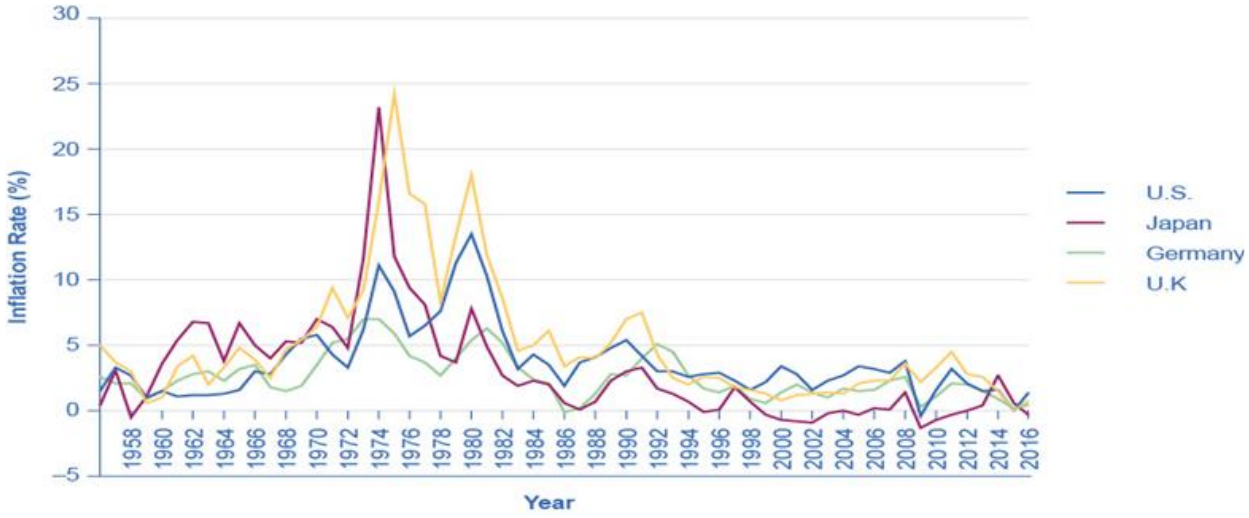
Figure 1. Increase in Concentration and Recent Rates of Inflation in the EU



Source: Inflation

7. The following graph displays the evolution of the rate of inflation for four of the world' s main economies. We see that, after steady growth from 1958 to 1970, inflation exploded over the next two oil crises and their aftermath, to then embark on a downward trend which was only interrupted by the current COVID and Ukraine crises which sent the rate back around 10%.

Figure 2. Inflation in the Long Run



8. There are a few lessons to draw from this graph. First, previous large inflationary episodes came from supply shocks. Second, they took a number of years to subside and, third, also concerning current inflation rates in most countries are not extraordinary from a long term perspective.

9. More insights into today's inflation can be gained from Table 1. In particular, we observe significant disparities across countries, even for countries that belong to the same economic area.

Table 1. Inflation Rates per Country

Country/Area	Inflation Rate March 2022 (%)
USA	8.5
Japan	1.2
Brazil	11.3
UK	7.5
Turkey	61.1
EU	7.8
Lithuania	15.6
Netherlands	11.7
Belgium	9.3
Germany	7.6
Italy	6.8
Denmark	6.0
France	5.1

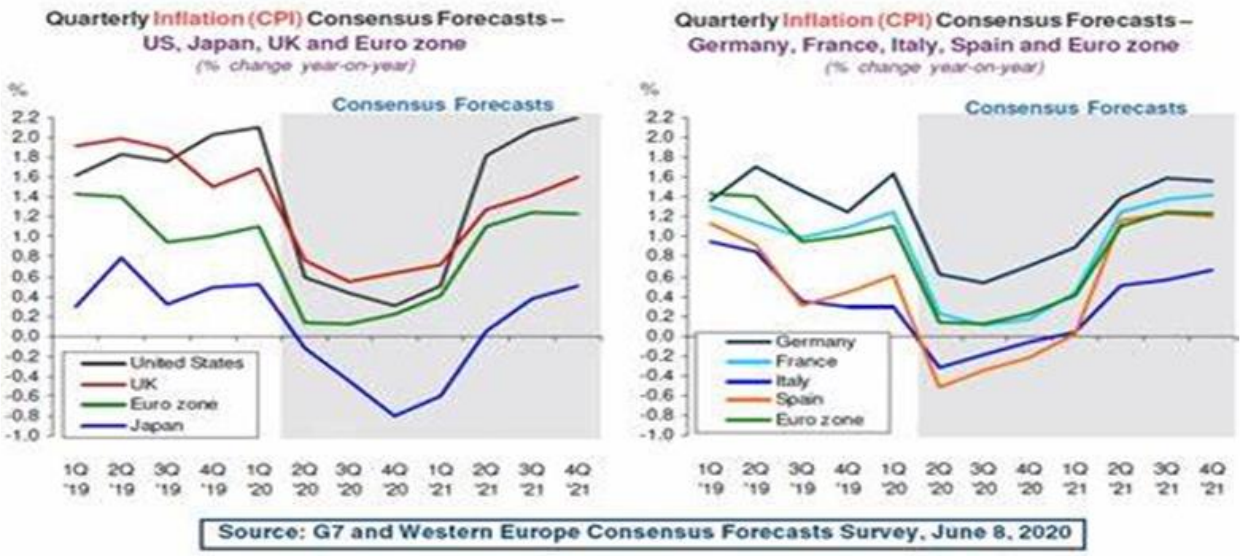
2.2. Inflation and Market Structure

10. The available evidence simply does not support the claim that an increase in industrial concentration would be a material factor in the recent emergence of significant inflation. To begin with, as we can see from figure 2, the last 70 years have only witnessed two episodes of sustained double-digit inflation worldwide. The first one – and the most spectacular – was triggered in the 70s and early 80s by two oil crises. There is no indication that this period also witnessed increases in industrial concentration. The second episode corresponds to the current crisis. However, as shown in figure 1, industrial concentration

appears to have increased steadily over the last 25 years, while the rate of inflation only started picking up in earnest in 2021. Moreover, over this whole period, there seems to be no correlation whatsoever between the rate of increase or even the level of inflation and the rate of change in market concentration.

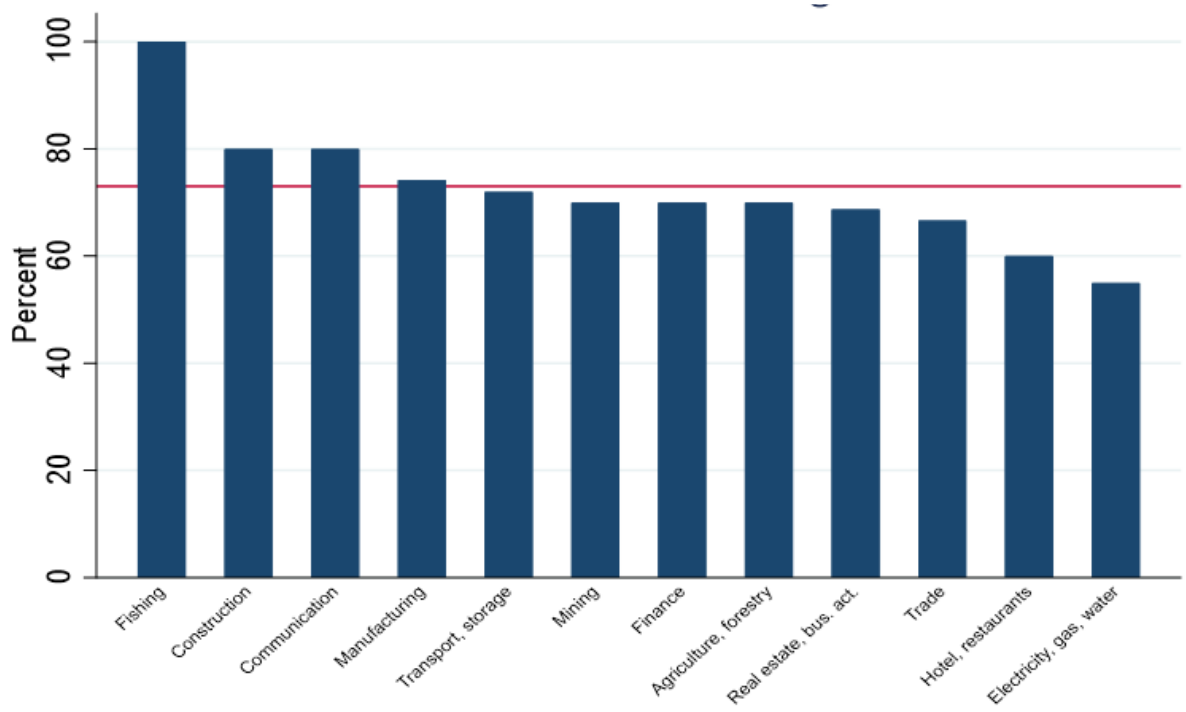
11. One might also think that, if the link between rising concentration and inflation was so clear that the inflation resulting from ever greater concentration would have been expected by the markets. As shown in Figure 3, it was not.

Figure 3. Expected Inflation



12. If inflation was linked to industrial concentration, then we would expect to see higher rates of inflation in the most concentrated sectors or in the sectors having experienced the larger rise in concentration. This is checked in Figure 4 and Table 2.

Figure 4. Share of industries with increasing concentration



Source: Koltay et al. (2022)

Table 2. Rate of Inflation per Sector, EU

Sector	Annual Rate of Inflation (January 2022)
Housing, Water, Gaz, Electricity, Fuels	12%
Transport	10.8%
Food and Non-alcoholic Beverages	4.9%
Restaurants and Hotels	4.6%
Furnishing, Household Equipment	3.4%
Recreation and Culture	3.2%
Health	1.3%
Communications	-0.1%

13. Comparing Figure 4 and Table 2, it is clear that there is no correlation between sectors with high inflation and sectors having experienced higher than average increases in concentration.

14. One can also ask a more fundamental question: can changes in market structures, which lead to higher price *levels* account for high rates of price increase over a period of one to two years. To shed some light in on this question we consider a simple model with a linear demand $Q = 1 - P$ and a constant marginal cost c. We choose the cost parameter so that a monopolist would have a profit margin of 33%. Under this assumption, an increase in concentration which would move the sector from perfect competition to monopoly would increase prices by 50%. Over the last twenty years, when concentration appears to have increased, this amounts to a rate of inflation of 2.2% per year. If instead we calibrate the profit margins to correspond to the level of concentration actually observed at the beginning of the period, then the implied rate of inflation is less than 1% per year over 20 years.

15. So, even increases in concentration that extend way beyond what we observe could not possibly account for the rates of inflations observed.

3. Market Structure and the Effects of External Shocks on Prices

16. Let us now tackle a different issue. If one excludes the role of monetary and fiscal policies, which are clearly beyond the scope of Competition Authorities, inflation stems mostly from demand and/or supply shocks. There are no indication that competition policy itself is responsible for these shocks. It might however be that market structure helps determine the magnitude of the price increases resulting from a particular set of shocks. In more technical terms, market structure might be a determinant of the *rate of pass-through* of these shocks into price increases.

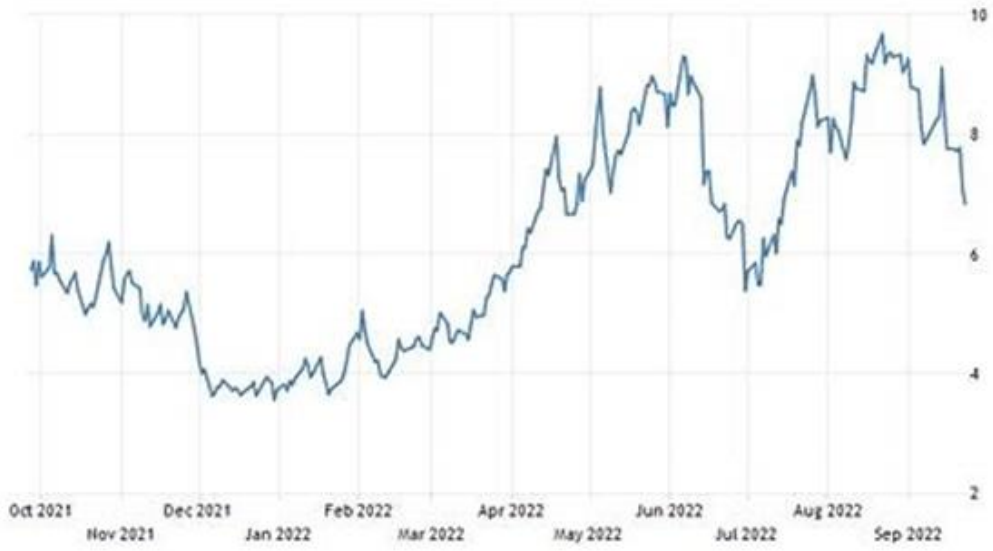
17. There is in fact a well-established economic literature on this topic[3]. Its robust conclusion is that, unless demand is unusually convex, greater market power magnifies the effect of demand shocks and dampens the effects of supply shocks. It seems reasonable to assume that the Covid crisis began mostly as a demand shocks with some supply bottlenecks developing over time. By contrast, the ongoing Ukraine crisis is best characterised as a set of strong supply shocks, especially in the energy sector. Accordingly, while a more concentrated market structure might have amplified early shocks it should, if anything have dampened the price effect of the subsequent supply disturbances.

18. In fact, the most reasonable reading of the current inflationary episode is that it was mostly triggered by strong supply shocks both in the energy sector and in the transport/logistic sector. The size of these shocks (see below) can easily account for the levels of inflation experienced, and also helps explain the ranking of sectors by inflation discussed before.

[3] See, for example, Menezes, F.M. and J. Quiggin, 2022, *SSRN 4216325.*

Figure 5. European Wholesale Gas Prices Jan – Jun 2021

Figure 6. European Wholesale Gas Prices Oct 2021 to Sept 2022



4. A Role for Competition Policy?

19. From the discussion above it should be clear that we do not feel that current inflationary conditions can be traced back to the evolution of market concentration or competition policy itself. In this view, then, the most important conclusion is that

competition policy should stay the course and should, in particular resist call for policies (e.g. of the national champion variety) likely to decrease competition in the Single Market or policies (such as poorly designed price caps) that would deprive markets, especially energy markets, from vital price signals, possibly endangering some of the Commission's Green Deal objectives.

20. Still, competition policy should be able to provide some moderate help. There are for example reasons to believe that, in some sectors, firms might find it easier to raise prices (beyond their increase in costs) in a coordinated manner. This is not only because customers are less likely to complain at times where price increases are normalised but because it might seem more natural to communicate about price increases and cost increases in a period where this is what most people talk about. So cartel units should be on the look-out.

21. Given that a big part of the supply shock comes from the energy sector, one would in fact hope that a number of prices would not only stop increasing but *decrease* once supply issues get resolved. Clearly some price increases may subsist as some of the cost increases (say indexed wages) cannot really be reversed. On the other hand, energy prices themselves, from wholesale to retail should eventually fall as should the price of energy or transport- intensive products and services. The behaviour of these sectors (construction, energy, .) should be closely monitored in the months and years to come. In this respect, Competition Authorities with broad investigation power are at an advantage.

22. Competition authorities can also help companies specify temporary horizontal agreements aimed at eliminating bottlenecks or coordinating an efficient restart of hard-hit sectors. While such agreements might be needed, it is important that they do not facilitate coordination on important competitive dimensions and that they only be short-lived.

23. Finally, as much of the current supply shock comes from the energy sector, and in particular from the price of natural gas, competition authorities and energy regulators should work together to help design market mechanisms (I particular electricity markets), that reduce the impact of natural gas on electricity prices and the economy at large while preserving the signal value of spot prices.

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