Wage indexation to prices and inflation expectation anchoring

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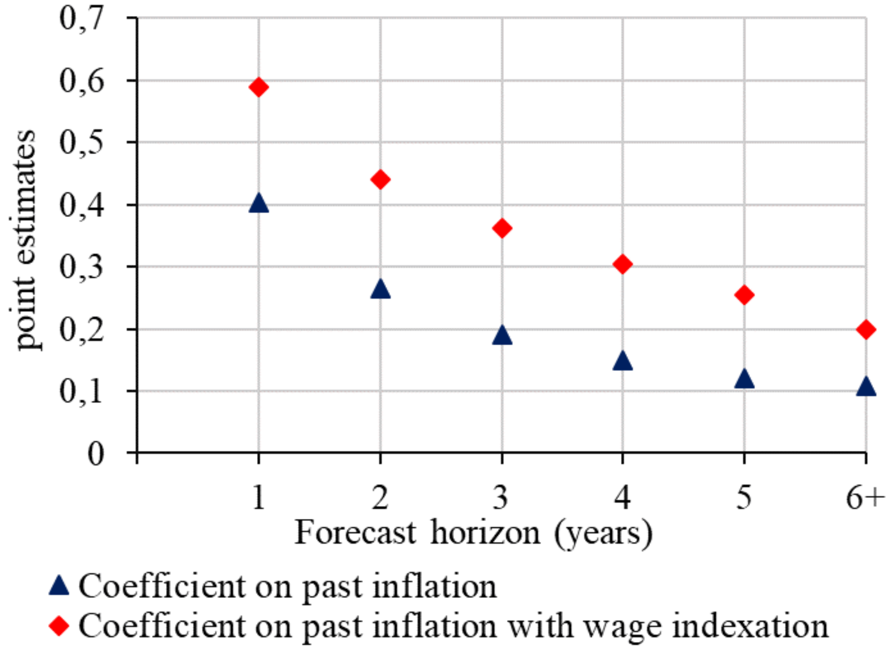
A low pass-through of realized inflation on inflation expectations is an indication of well-anchored expectations, which in turn facilitate a central bank's task of containing inflation. Yet, we show that this pass-through is more elevated in economies with high wage indexation to prices. The decline in the prevalence of wage indexation therefore helps central banks to fight inflation without triggering a 'hard landing'.

Chart 1: Pass-through on expectations: the amplifying role of wage indexation



Source: Authors' calculations.
Note: Estimates based on a panel regression for 22 countries from April 1990-to January 2022. Past inflation is measured as previous month year-over year percentage change in the consumer price index. Inflation expectations are measured as the mean from a panel of professional forecasters (Consensus).

The role of labour market characteristics for inflation dynamics

Characteristics of wage negotiations in labour markets influence how economic shocks on the supply and demand side affect the economy. If collective bargaining institutions are set-up such that they internalize the economy-wide effects of wage adjustments, e.g. via unemployment, collective bargaining is likely to be more muted after a transitory rise in inflation. However, if feedback effects arising from wage negotiation outcomes on the rest of the economy are mostly ignored, unions may negotiate higher wages, leading to more persistent inflation dynamics (Bowdler & Nunziata 2007). A special case is wage indexation to prices as it introduces a structural backward looking component into nominal wage contracts (Fuhrer 2011).

These labour market characteristics have hence implications for the shape of the so-called wage Philips curve relationship, which describes the link between current wages on one side and past wages and unemployment on the other side. The main take-away is that under wage indexation inflation is more sensitive to unemployment, making the wage Phillips curve 'steeper' as the business cycle matters more for wage setting (Gali 2011).

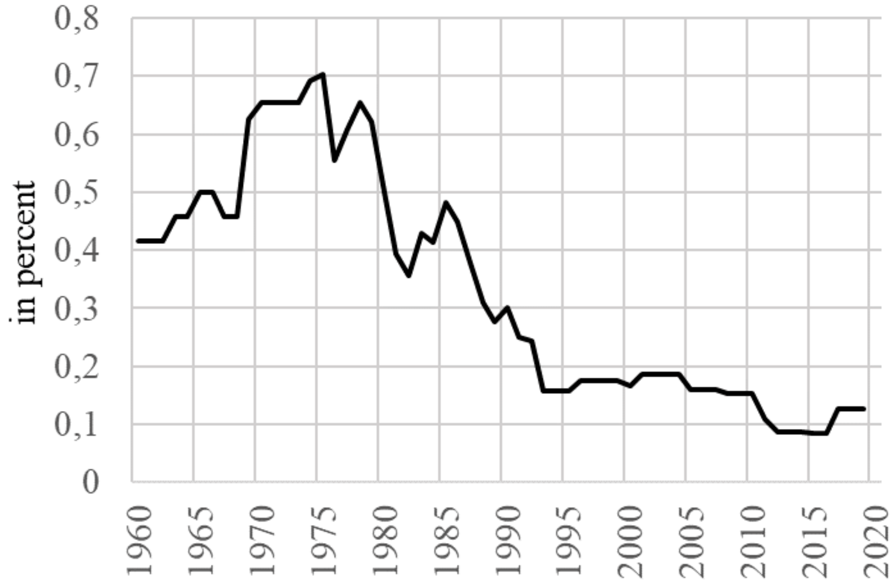
Wage indexation over time and across countries

Chart 2 depicts the prevalence of wage indexation in 56 countries of the European Union and the OECD since 1960, i.e. the share of countries in which collective agreements contain some clause linking wages to prices. This was for instance the case in France before 1983 (except in 1968 and 1976). While the share of countries with wage indexation increases at the beginning of the period, chart 2 reveals that this trend is reversed in the late 70's. This is consistent with policymakers trying to weaken the price-wage loop in order to contain the inflationary consequences of the oil shock of 1973. In 2020, the share of countries with wage indexation is approximately 10%, which is four times smaller than in 1960. Five out of six countries with wage indexation in the sample in 2020, however, are located in the European Union (notably BE, BG, CY, LU and MT).

Wage indexation leads to less well anchored inflation expectations

Wage bargaining involve employers and households. Unfortunately, data on inflation expectations for firms and households across a large number of countries and going back in time is not readily available, although some progress is underway (Bouche et al. 2022). We therefore refer to inflation expectations by professional forecasters, which are known to affect household and firm inflation expectations since they are widely publicized (Carroll 2003). Professional forecasters base their assessment of the inflation outlook on models that are calibrated using historical data, which, *inter alia*, reflect the institutional features prevailing in the economy. Inflation forecasts for countries that exhibit a larger fraction of automatic indexation of nominal wages to inflation should therefore imply a higher pass-through of current inflation on short- to medium-term inflation expectations via this *inflation-persistence* channel. However, if inflation expectations are well anchored, this effect should dissipate with the forecast horizon. Long-run inflation expectations should be unaffected in this case by the amount of inflation persistence in the short-to-medium-term, as monetary policy is believed to bring inflation back on target over the medium term. On the contrary, if inflation expectations are not well anchored, a temporary shock in inflation will start the price-wage loop, leading to a shift in long-term inflation expectations, extending the short-to-medium-term effect.

Chart 2: Share of countries adopting wage indexation in OECD countries over time



Source: OECD, and authors' calculation.
Note: Data covers 56 countries. Average across binary variable on wage indexation; 1="(most or many) collective agreements contain (semi-) automatic index or cost-of living escalator clauses, linking wages to prices". Last observation: 2020.

To test this idea we compare inflation expectations from Consensus Economics to past inflation (inflation pass-through) over horizons from 1 to six years in an empirical model of a panel of 22 OECD countries for the period from 1990 to 2022 (Chart 1). In the estimation process, we disentangle between countries where no indexation clause prevails in collective agreements (blue triangles) and countries where they do (red diamonds). In the first group, the amplitude of the average pass-through is rather high for the one-year horizon and shrinks continuously with the forecast horizon to less than a third of its short-term value for long-term horizons.

In the second group of countries, as expected, the pass-through is higher for short- to medium-term horizons. But, the amplifying effect of the presence of wage indexation on expectations in the short term does not dissipate over time as red diamonds stay above the blue triangles at all horizons, in particular beyond two years, which is the typical transmission lag in the effect of monetary policy. In addition, in relative terms the distance even increases with the forecast horizon: for long-term expectations, pass-through is almost twice as high in economies with wage indexation against only 50 % over the one-year forecast horizon.

From a monetary policy perspective, well-anchored inflation expectations are instrumental for central banks to better adjust their policy response, making a soft-landing more likely after a rise in inflation. In this regard, the implication of the finding in this blog is that central banks in economies with high levels of wage indexation have, everything else assumed equal, less room to balance the trade-off between fighting inflation and preventing a recession as they need to use the policy instrument more strongly. On average, wage indexation is not very common in euro area member countries. This supports the Eurosytem in the delicate task of keeping expectations anchored, although other factors also matter for anchoring of expectations, as e.g. a central bank's credibility to fight inflation as captured by its track-record (Neuenkirch and Tillmann 2014) or the specific formulation of an inflation target (Grosse-Steffen and Marx 2022).