

French economic outlook



Consumer prices for services, mainly determined by the cost of labour, are expected to remain buoyant in 2024 but without picking up further

While inflation has been in decline since mid-2023, notably due to the significant slowdown in food prices, the prices of services remain relatively dynamic. Thus, taking into account their weight in the household consumer basket (around 50%), services have been the main contributors to headline inflation since October 2023. As a result, changes in the prices of services, where the cost of labour plays a major role, can provide information on the risk of a runaway wage-price spiral.

The sharp increase in the consumer prices of energy products in 2021 and 2022 was followed first by strong inflation in food products (and to a lesser extent in manufactured products). The increase in the prices of services came later and was more contained. These differences can be explained by the nature of the price shock, which was essentially imported. Clearly, the shock spread to domestic prices, but the extent and timing of this spread depended mainly on the structure of the inputs of each sector (majority of commodities or majority of labour force), and on other factors (degree of competition, types of contract upstream and downstream of production, etc.).

This Focus models changes in the consumer prices of services. Although services represent almost 50% of the consumer price index basket, the scope chosen for this Focus is limited to a services sub-field which accounts for most of the variation in the prices of services; in particular, administered prices or prices that are too volatile have been removed. This sub-field therefore includes, on the one hand, accommodation-catering and on the other hand, a set of services called, for the purposes of this Focus, “miscellaneous services” (maintenance and repair services, IT, legal, cultural and recreational services, aesthetic services, etc.). The price of “miscellaneous services” increased by around 5% in 2023 compared to 2022 and by about 9.4% compared to 2021. According to the model used here, the cost of labour would appear to account for almost 65% of the increase in prices in “miscellaneous services” between 2021 and 2023. In accommodation-catering, agrifood products –whose prices were particularly dynamic across the time period– are important inputs, alongside labour force. Thus the cost of labour would appear to account for a little over 45% of the increase in accommodation and catering prices between 2021 and 2023 (which was around +10%), while the increase in agrifood products would appear to account for almost 25%. The model suggests that consumer prices of services probably evolve according to their “historical behaviour”, without the wage-price spiral spinning out of control.

The model selected here suggests two main reasons why the prices of services continue to rise (around +1% per quarter since the beginning of 2023) and why this rise is delayed. First, the predominant weight of the labour factor in the function of production: the dynamism of the price of services occurs later as wages lag behind in adjusting to inflation. In addition, delays in passing on the price of services are structurally lengthy: the earlier increase in the cost of labour does not yet seem to have been entirely passed on to prices. This would justify forecasting an increase in prices of “miscellaneous services” and accommodation-catering of around +1% per quarter, but without them picking up further in 2024.

Narjis Benchekara et Guillaume Roulleau

Since the beginning of 2023, the year-on-year variation in consumer prices for services has remained at around 3%, i.e. much less than for food or energy. Yet services make a significant contribution to headline inflation, as they represent 50% of the consumer price index (CPI) basket.

Within the services sector, price variations can differ widely (► **Figure 1**). Some prices appear to be increasing substantially (+5.9% forecast in transport services across the whole of 2023, compared to 2022), while others are decreasing (-3.8% forecast in communication services).

In fact, services are made up of very varied “products”, with prices not always obeying the same determinants. The prices of some services are “administered” (i.e. they are largely set by public authorities, such as health services) or they may be regulated (e.g. residential rent adjustments may not exceed the rent reference index). In other services prices are very volatile due to the concentration of players involved (in telecommunications services, for example, where a price change by one operator can have a significant impact on the entire item) or to the price-fixing methods used (in air transport, for example, prices depend mainly on oil prices, but also on the optimisation techniques –known as *yield management*– that companies apply).

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The purpose of this analysis is to gain a better understanding of the economic determinants involved in price variations in services. Those services where prices are administered or too volatile and would require modelling that is too complex or not sufficiently dependent on economic determinants are therefore excluded from the scope of the study. Thus the study covers the short-term grouping known as “other services” –i.e. excluding “rent, water, waste”, health services, communication and transport services. Within this group, administered and/or volatile prices (broadcasting licence, etc.) are excluded. What remains is a sub-field of “other services”, covering some relatively diverse products.

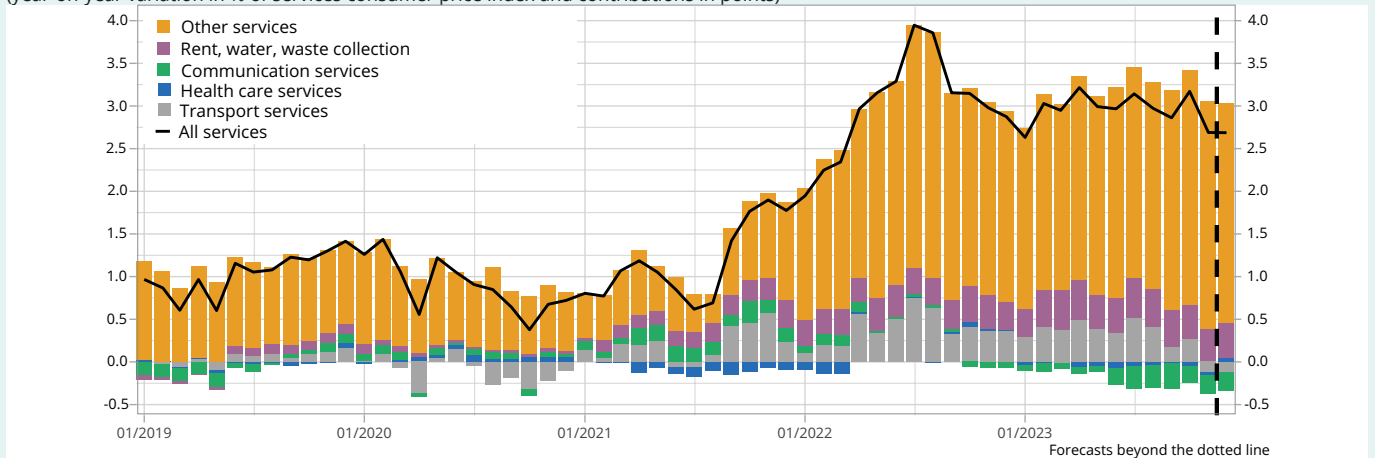
Within this sub-field, this analysis is divided between accommodation-catering services, given their weight in household consumption (16% of the CPI for all services, ► **Figure 2**), and the rest, hereafter described as “miscellaneous services”. These are taken as a whole, even though they also include some widely differing services, especially maintenance and repair services for personal vehicles (about 8% of the CPI for all services), housing (5%) or objects (1.5%), also legal services (3%), cultural and recreational services (3%) and aesthetic services (1.6%). All in all, the services modelled in this study represent 20% of the CPI as a whole and 40% of the services CPI. In 2023, they appear to account for almost 70% of inflation in all services.

Prices in “other services” have been picking up since the beginning of 2021: their year-on-year variation rose from +0.9% in January 2021 to +2.6% in January 2022 then from +3.5% in January 2023 to +4.3% in November. The dynamics of wage costs is one of the factors contributing to this acceleration and the aim of this analysis is to demonstrate how they are passed on to consumer prices. In fact, “other services” are particularly labour intensive in their content: in 2019, for example, employee remuneration represented over 60% of value added in accommodation-catering services and the repair of automobiles and motorcycles and up to 70% for other service activities (against 54% in industry).

Logically, inflation in “other services” was slow to react to the increase in commodity prices, both in agriculture and energy, which began in 2021 then intensified in 2022 with the outbreak of war in Ukraine. ► **Figure 3** shows the long time

► 1. Inflation in services and contribution by the sector’s sub-fields

(year-on-year variation in % of services consumer price index and contributions in points)



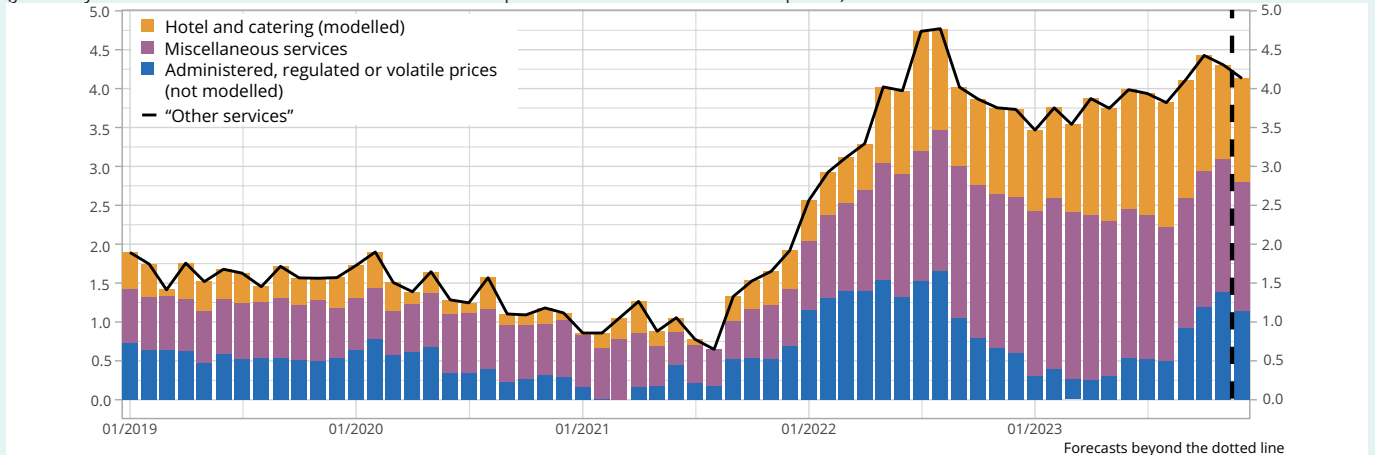
Last point: December 2023.

How to read it: in December 2023, inflation in services is expected to be 2.7%.

Source: INSEE.

► 2. Breakdown of inflation in “other services”

(year-on-year variation in % of “other services” consumer price index and contributions in points)



Last point: December 2023.

How to read it: in December 2023, inflation in “other services” is expected to be 4.1%.

Source: INSEE.

delay between the increase in the price of imported commodities, the cost of labour in market services and finally, the prices of “other services”. Since mid-2021, the momentum of the price of “other services” has lagged behind that of the cost of labour.

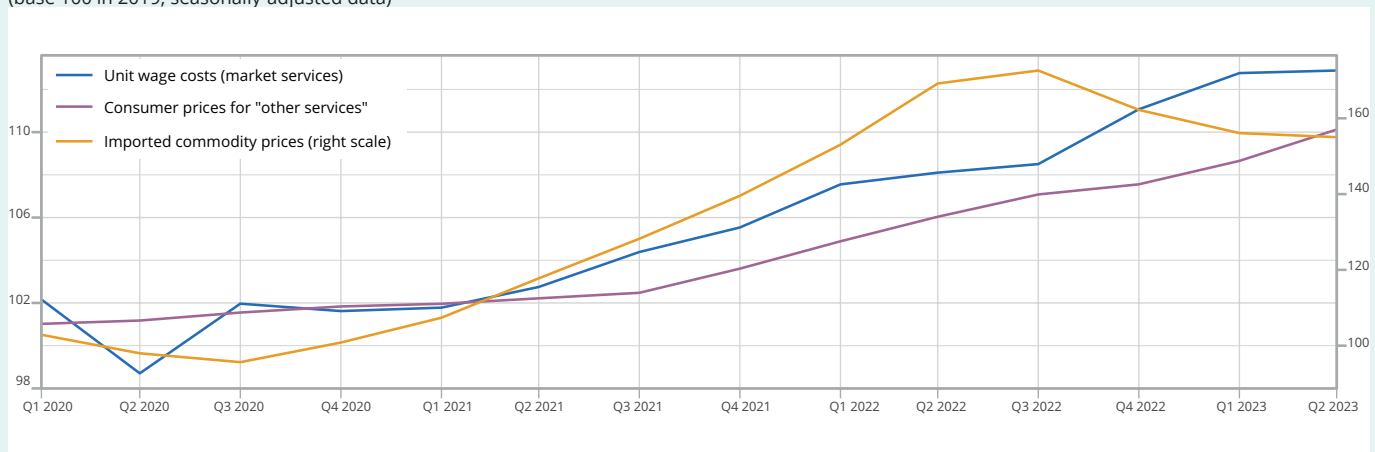
The increase in the cost of labour seems far from being passed on fully to consumer prices of “miscellaneous services”

Cumulatively between 2021 and 2023,¹ consumer prices for “miscellaneous services” increased by 9.4%. An econometric model of the dynamics of these prices is presented here, with the cost of labour as the main determinant (*via* unit wage cost in market services, ► **Method box** for more details on the different models). In particular, it is assumed that in the long term, the prices of “miscellaneous services” are indexed unitarily to unit wage costs in market services. However, it should be noted that in 2019, unit wage costs declined facially –due to the transformation of the Competitiveness and Employment Tax Credit (CICE) into a reduction in employers’ social contributions– with no impact on prices. All in all, and according to this model, the increase in “miscellaneous services” prices between 2021 and 2023 appears to result mainly (almost 65%) from the increase in the cost of labour (► **figure 4**).

¹ Here consumer prices are observed up to November 2023 then forecast for December.

► 3. Change in consumer prices of “other services” compared to unit wage costs in market services and prices of imported agricultural commodities

(base 100 in 2019; seasonally-adjusted data)



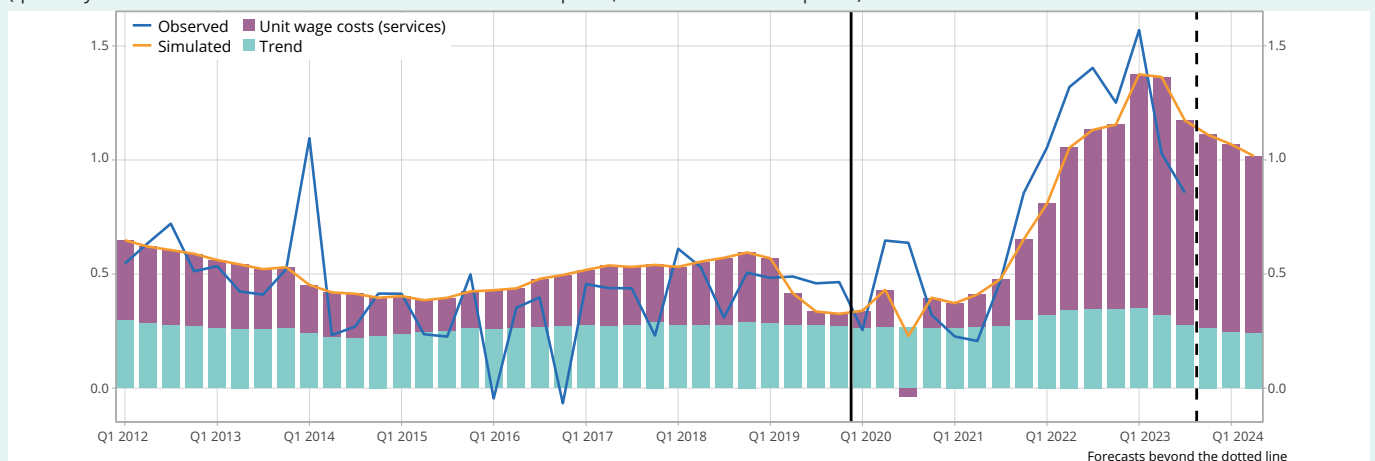
Last point: Q2 2023.

How to read it: in Q2 2023, the consumer price index for “other services” (seasonally adjusted) reached 111 points, which corresponds to an 11% increase compared to its 2019 average, while the price of agricultural commodities rose by 55%.

Source: INSEE.

► 4. Variation in consumer prices of “miscellaneous services” and econometric contributions of its determinants

(quarterly variations in % of “miscellaneous services” consumer prices, and contributions in points)



Last point: Q2 2024. End of the estimation period to the right of the solid line.

Note: the model was estimated between Q1 1998 and Q4 2019. The yellow curve corresponds to the model simulation, the blue curve to observed then forecast quarterly variations. Beyond the dotted line, as a forecast, the blue curve (observed) corresponds to the model forecasts (yellow curve). The consumer price of “miscellaneous services” corresponds to the CPI category “other services”, but without accommodation-catering and services whose prices are administered or are too volatile.

How to read it: in Q1 2023, the prices of “miscellaneous services” rose by about 1.6% while the model of these prices forecast an increase of 1.4%. Unit wage costs could probably account for almost 65% of this price rise.

Source: INSEE, INSEE calculation.

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Due to the assumption of long-term unit indexation, a permanent 10% increase in unit wage costs translates in the long term into a 10% increase in the prices of “miscellaneous services”. However, the estimated transmission times are long: after 2 years, only 60% of the shock appears to be passed on to the consumer prices of “miscellaneous services” (► **Box**: Price-response function modelled to an increase in the cost of labour). The restoring force to return the price to its long-term target is slower than those estimated in the food production chain (► **Benckekara, Marquis and Roulleau, 2023**). This result is consistent with the literature, especially in microeconomics, on sectoral variations in price rigidity: for example, ► **Dias and al., 2011** consider that (all other things being equal) service sector companies modify their prices much less often than manufacturing industries.

By looking at levels (rather than variations) of observed and simulated prices of “miscellaneous services”, it can be seen that the price set by these branches is systematically below the long-term price target (► **Figure 5**). In fact, the model used here assumes that the prices of “miscellaneous services” fluctuate in the short term around a “long-term target” determined unitarily by unit wage costs. The fact that observed and simulated prices are below this long-term target suggests that as yet not all of the past increase in the cost of labour has been transmitted to the consumer prices of “miscellaneous services”. Furthermore, the superposition of the two curves of observed and simulated prices also suggests that these branches have adopted a price-fixing behaviour consistent with their “historical behaviour”: thus there would appear to be no momentum in the price of “miscellaneous services” that is not explained by the model and that could suggest a surge in the wage-price spiral. This analysis was carried out on “miscellaneous services” taken as a whole and may therefore mask disparities within this sub-field.

Given the dynamism of the cost of labour during 2023 and taking into account the delay in its transmission to consumer prices, it is likely that “miscellaneous services” prices will continue to pass on recent wage increases. As a result, as a forecast for 2024, the prices of “miscellaneous services” (seasonally adjusted) should remain relatively strong, with an increase of around +1% per quarter.

In accommodation-catering, consumer prices are expected to be boosted by the momentum of wage costs but also by the increase in the price of agrifood products

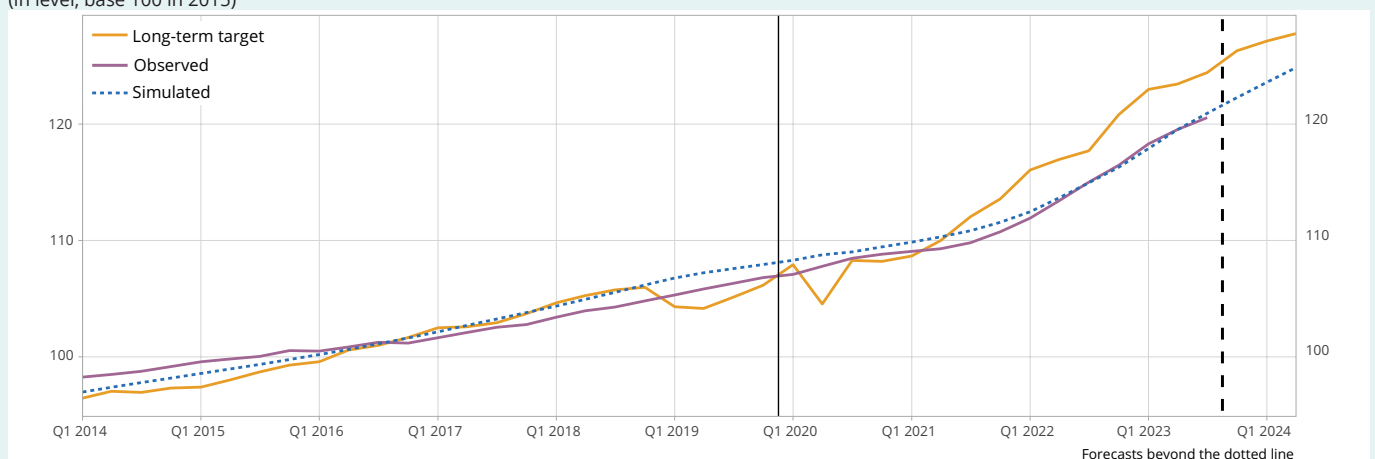
As consumer prices in accommodation-catering are very strongly seasonal (prices increase during school holidays due to increased demand), the model presented here concerns the consumption deflator (seasonally adjusted) for accommodation-catering services. This indicator, based on the quarterly accounts, is a good approximation of the seasonally adjusted CPI for accommodation-catering services.² Between 2021 and 2023, the price of accommodation-catering services increased by about 10%. However, its momentum differs from that of the prices of “miscellaneous services” modelled previously.

After some upheavals during the health crisis when the sector was particularly badly affected by the restrictions on activity, the prices of accommodation-catering services were especially dynamic from the end of 2021, whereas the increase in prices of “miscellaneous services” was more gradual. Econometric modelling suggests that, unlike

² For convenience, this deflator will be called the “price of accommodation-catering services”. The results are robust for the use of the seasonally adjusted CPI for accommodation-catering services.

► 5. Consumer prices of “miscellaneous services”: observed, simulated and long-term price

(in level, base 100 in 2015)



Last point: Q2 2024. End of the estimation period to the right of the solid line.

How to read it: the observed level of prices in “miscellaneous services” was 118, the same as the simulated level. However, the “long-term price” is expected to reach 123.

Source: INSEE, INSEE calculation.

“miscellaneous services”, prices in accommodation-catering depend not only on the cost of labour (proxied by the average wage per capita in market services) but also on the price of the inputs used in these sectors, i.e. energy and agrifood products (► **Figure 6**).

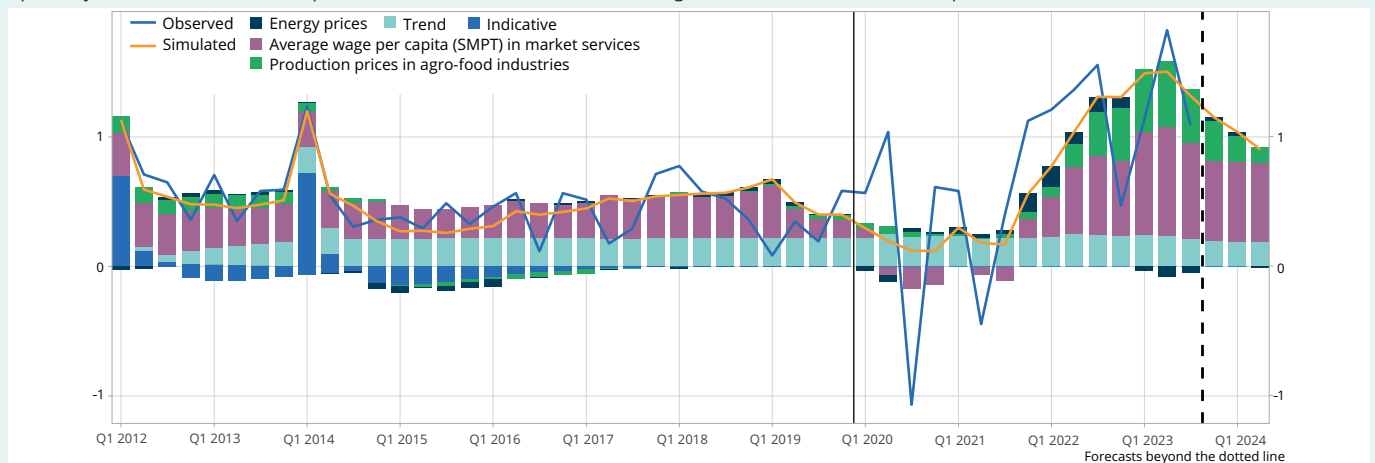
Thus, on average in 2022, compared to 2021, the contribution of energy prices to the variation in accommodation-catering prices would appear to be of the same order of magnitude as that of the cost of labour (about 25%). Across 2023, the rise in producer prices in the agrifood industries (► **Benckekara, Marquis and Roulleau, 2023**) would seem to account for a large proportion of the momentum in accommodation-catering prices (around 40% every quarter). On average between 2021 and 2023, the cost of labour is likely to remain the main determinant for the increase in the price of accommodation-catering services, accounting for almost 45%, although this is less than for the increase in prices of “miscellaneous services”. Energy input prices are expected to contribute 5% and food input prices 25%.

The delays in passing on the increase in the cost of labour appear to be shorter in accommodation-catering than in “miscellaneous services”. After 2 years, 85% of a permanent increase in the cost of labour is expected to be passed on (against 60% for “miscellaneous services”). In the long term, a permanent rise of 10% in the cost of labour appears to lead to a price rise in accommodation-catering of over 8%.

As in the analysis of “miscellaneous services” prices, the difference between the observed selling price in accommodation-catering and the “long-term target” can provide information on the scale of past cost increases which would still have to be passed on in prices (► **Figure 7**). Since mid-2021, both observed and simulated prices in accommodation-catering have

► 6. Variation in consumer prices of accommodation-catering services and econometric contributions of its determinants

(quarterly variations in the consumption deflator for accommodation-catering services in %, contributions in points)



Last point: Q2 2024. End of the estimation period to the right of the solid line.

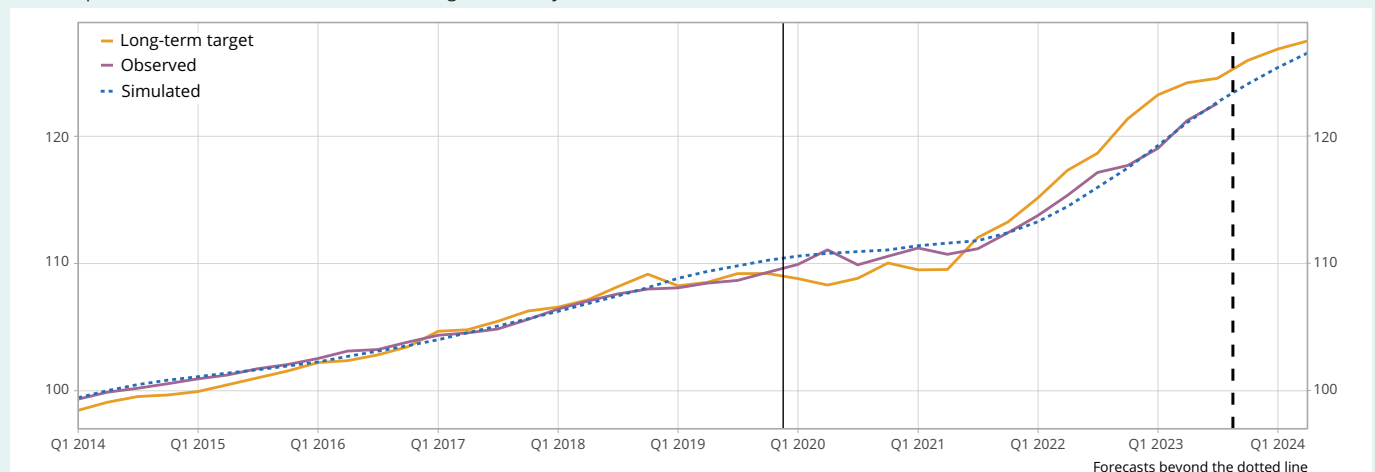
Note: the model was estimated between Q1 1995 and Q4 2019. The yellow curve corresponds to the model simulation, the blue curve to observed then forecast quarterly variations. Beyond the dotted line, as a forecast, the blue curve (observed) corresponds to the model forecasts (yellow curve).

How to read it: in Q1 2023, prices of accommodation-catering services rose by about 1% while the model of these prices forecast an increase of 1.2%. Average wages per capita probably account for almost 76% of this price rise.

Source: INSEE, INSEE calculation.

► 7. Consumer prices in accommodation-catering: observed, simulated and long-term price

(consumption deflator for accommodation-catering services, by level, base 100 in 2014)



Last point: Q2 2024.

How to read it: in Q1 2023, the observed level of consumer prices in accommodation-catering was 119, the same as the simulated level. However, the “long-term price” is expected to reach 123.

Source: INSEE, INSEE calculation.

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been well below long-term prices, which would suggest that transmission of the cumulative increase in the cost of labour is still not complete. In addition, the fact that the simulated and observed price levels are relatively similar also suggests that the price-fixing behaviour in accommodation-catering is consistent with “average behaviour” in this branch in the past: there would appear to be no unexplained momentum in these prices, as in “miscellaneous services” prices.

The difference between observed prices on the one hand and long-term prices on the other could possibly be interpreted as a normal and transitory phenomenon of weakening margins in the sector during the inflationary period. The ongoing catch-up between prices and their long-term target would then correspond to a “normalisation” of the sector’s margin rate. While this interpretation is the result of potential imperfections in the selected model, it is nevertheless corroborated by results from the national quarterly accounts: the margin rate for accommodation-catering does appear to have been in a continuous decline since 2021 and until early 2023, when it began to pick up (► **Figure 8**).

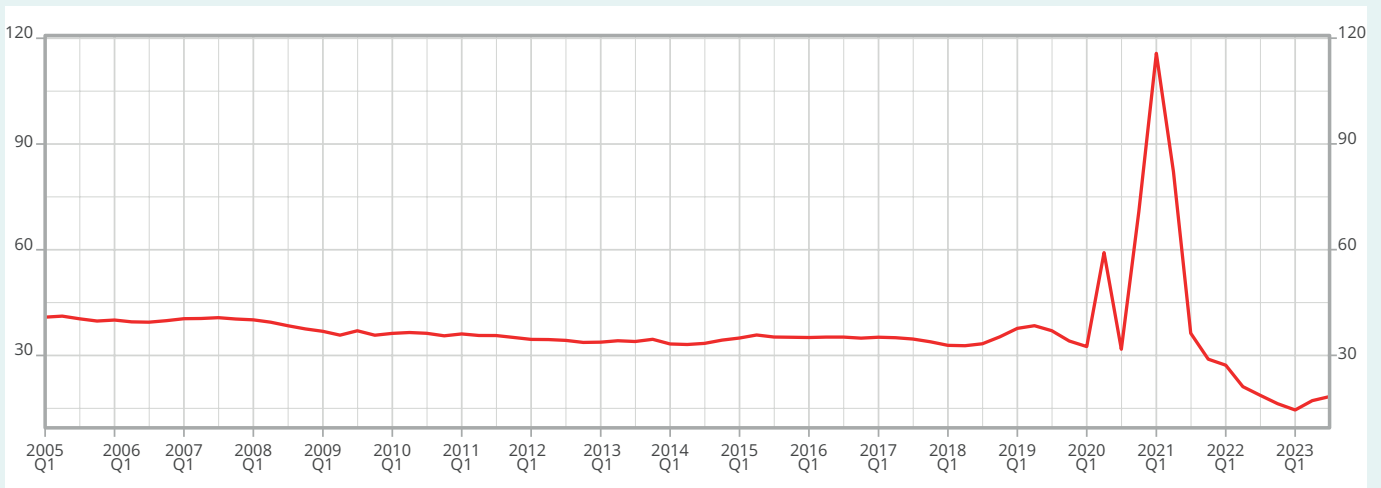
According to the 2024 forecast, the decline in energy prices from the end of 2022 and the drop in producer prices in the agrifood industries from H2 2023 should alleviate upward pressure on prices in accommodation-catering services. However, earlier increases in food product prices have not yet been fully passed on through accommodation-catering selling prices. Their residual repercussions along with moderately buoyant wages could account for an increase in selling prices of close to +1% per quarter in 2024 (in seasonally adjusted data), in deceleration.

To conclude, between 2021 and 2023, inflation in “other services” was more contained than that in energy or food, but nevertheless increased continuously, or almost. Econometric modelling suggests that in the “miscellaneous services” sub-field and in accommodation-catering also, labour is the main explanatory factor for the rise in consumer prices. Also, the increase in the cost of labour since 2021 could account for almost 65% of the increase in consumer prices in “miscellaneous services” and almost 45% for those in accommodation-catering.

In addition, at this stage, accommodation-catering businesses and those in “miscellaneous services” do not appear to have passed on all of the increase in the cost of labour throughout the period. Thus, prices in the services studied here could remain dynamic into 2024, rising by about 1% per quarter, but without picking up further. ●

► 8. Margin rate in accommodation-catering

(in % of value added)



Last point: Q3 2023.

How to read it: in Q2 2023, the margin rate in accommodation-catering (gross operating surplus of the branch divided by its value added) is expected to be 17% against almost 38% over the period 1995-2019. The atypical movements in 2020 and 2021 are caused by production subsidies paid during the health crisis (especially the Solidarity Fund).

Source: INSEE, INSEE calculation.

Method box

The modelling of consumer prices in accommodation-catering and in “miscellaneous services” is based on error correction models (ECM), using similar techniques to those presented in an earlier focus (► [Benchekara, Marquis and Roulleau, 2023](#)) to model producer prices and the consumption of food products. This type of modelling is used to estimate the links between prices and their determinants by establishing a long-term relationship (adjustment against an “equilibrium price”) and the short-term dynamic.

Thus the underlying theory assumes that the different branches aim for an “equilibrium price” (or “long-term target”) stabilising their unit margins¹. However, adjustment to the long-term target does not happen immediately, but depends on a certain momentum, which can be estimated. Formally, let P_t be the price of services and C_{mt} the marginal costs of production, then the general form of the estimated equations is as follows:

$$\Delta \log(P_t) = \underbrace{\alpha + \beta_1 \Delta \log(P_{t-1}) + \beta_2 \Delta \log(C_{mt})}_{\text{short-term dynamics}} - \rho \left[\underbrace{\log(P_{t-1}) - \mu - \log(C_{m,t-1})}_{\text{long-term dynamics}} \right] + \epsilon_t \quad (1)$$

ECMs are often applied when modelling inflation (see, for example ► [Milin, 2017](#), ► [Charsonville and al., 2017](#) or ► [Ulgazi and Vertier, 2022](#)). The difficulty with modelling lies in the fact that the elasticities governing relationships between price and cost of inputs are estimated over time periods when inflation is low (from the end of the 1990s to 2019), which may detract from the model’s predictive quality in a context of high inflation.

Thus it is implicitly assumed that, in the current period, companies’ reaction to an increase in the price of inputs is the same as during the estimation period, when inflation was much lower. However, price adjustment is potentially faster in a period of high inflation (► [Borio and al., 2023](#) and ► [Cavallo et al., 2023](#)). As in ► [Benchekara, Marquis and Roulleau, 2023](#), the error correction models presented here assume that the stronger price diffusion in times of high inflation can be captured using data from the business tendency surveys, in particular the balance of opinion on expected change in selling prices in the sector concerned.

Econometric modelling of price changes in “miscellaneous services”

In the long term, the model assumes that the price of “miscellaneous services” is to be indexed on a unitary basis on unit wage costs in market services. In fact, the elasticity estimated by the long-term relationship is significantly higher than the unit measurement, which is difficult to justify theoretically and detracts from the forecasting qualities of the model. A linear trend is also added over the period. Even if the long-term equation does not respect the stationarity condition for the residual at the 10% threshold, the model’s performances remain very good.² The short-term dynamic includes the delayed variations in the price of “miscellaneous services”. Finally, the restoring force of the model is weighted by the absolute value of the balance of opinion on expected change in selling prices in retail trade,³ derived from the monthly outlook surveys, in order to take into account the non-linear effect of a period of high inflation on price transmission. The selected model is therefore as follows:

$$\Delta p_t^a = 0.31 + 0.27 \Delta p_{t-1}^a + 0.19 \Delta p_{t-2}^a - 0.06 \times (1 + s_t^{GZ}) \times [p_{t-1}^a - csu_t^{DSM} - 0.003 t] + \epsilon_t^a \quad (33)$$

Estimation : 1998Q1-2019Q4 , $R^2 = 0.51$, $DW = 2.0$, $\sigma_p^2 = 0.08$, $RMSE = 0.01$

where:

- p^a is the logarithm of the consumer price of “miscellaneous services”, excluding accommodation-catering (source: INSEE);
- csu^{dsm} is the logarithm of unit wage costs in market services, defined as employee pay divided by the value added of the sector by volume (source: national quarterly accounts, INSEE);
- s^{GZ} is the absolute value of the balance of opinion on expected change in retail trade selling prices (source: monthly

¹ Even though, empirically, a branch’s margin rate may not respect this assumption of stationarity, in the event of a change in its competitive intensity, for example..

² Note that the hypothesis of non-stationarity of the residual is rejected at a threshold of 11% in a stationarity test of the usual Dickey-Fuller type.

³ In the NAF classification of activities, “miscellaneous services” corresponds to a combination of the trade branch (e.g. for automobile repair) and the services branches (e.g. hairdressers). Thus the balances of opinion on expected change in both retail trade selling prices and services would be potential candidates. The balance in retail trade was the one that was ultimately chosen due to its better predictive performance.

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tendency survey in retail trade, INSEE). The average of this balance of opinion over the estimation period is very close to 0 (-5%), the balance was at its minimum in 2004 (-46.6% in September 2004) and at its maximum in March 2023 (+63.2%).

Econometric modelling of accommodation-catering prices

A long-term relationship is estimated between the consumer price in accommodation-catering, the cost of labour⁴ and producer prices in the agrifood industries. A linear trend is added after 2012 to ensure that the residual is stationary. The short-term momentum is based on the delayed variation in prices in accommodation-catering, and also on the variation in the price of energy⁵ (defined as a weighted sum of oil and gas prices by including contracts specific to the sector, ► [Benchevara, Marquis and Roulleau, 2023](#) for more details). Several dummies are added, mainly to capture changes in the VAT rate in catering (change from 19.5% to 5.5% in Q3 2009, then to 7% in Q1 2012 and 10% in Q1 2014). As when modelling the prices of “miscellaneous services”, the restoring force of the model is weighted by the absolute value of the balance of opinion in accommodation-catering on expected change in selling prices, the aim being to incorporate the non-linear effect of a period of high inflation on the speed at which prices are transmitted. The selected model is therefore as follows:

$$\Delta p_t^{HCR} = -0.23 + 0.25 \Delta p_{t-1}^{HCR} + 0.12 \Delta p_{t-2}^{HCR} + 0.01 \Delta nrj_t + INDICATRICE - 0.12 \times (1 + s_t^{HCR}) \times (p_{t-1}^{HCR} - 0.82 csu_{t-1}^{DSM} - 0.15 p_{t-1}^{C1} - 0.002 t_{1 > 2012}) + \epsilon_t^{HCR}$$

Estimation : 1995Q1-2019Q4 , $R^2 = 0.69$, $DW = 2.0$, $\sigma_p^2 = 0.08$, $RMSE = 0.01$

where:

- p^{HCR} is the logarithm of the deflator of consumption in accommodation-catering services (source: national quarterly accounts, INSEE);
- p^{C1} is the logarithm of the deflator of production by agrifood industries (source: national quarterly accounts, INSEE);
- smp^{dsm} is the logarithm of the average wage per capita adjusted for short-time working in market services (source: national quarterly accounts, INSEE);
- nrj is the logarithm of the price of energy in accommodation-catering (source: INSEE);
- $INDICATRICE$ is a set of dummies to take aberrant quarters into account (specifically: Q1 2002, Q4 2003, Q3 2009, Q1 2012 and Q1 2014);
- s^{HCR} is the absolute value of the balance of opinion on expected change in selling prices in accommodation-catering (source: monthly tendency survey in services, INSEE). The average of this balance of opinion over the estimation period is very close to 0 (2.5%), the balance reached its minimum during the health crisis (-35.5% in April 2020) and its maximum in January 2023 (+36.6%).

Price-response function modelled to an increase in the cost of labour

The error correction model can be used to simulate the effect of an exogenous shock on the different prices of services to assess the speed of diffusion of the shock. The simulation exercise consists in permanently increasing the cost of labour in market services by 10% in order to study change in the price of services across several years. As the cost of labour is not approximated in the same way in the different equations, a 10% increase in unit wage costs is simulated here, assuming that this corresponds to a 10% rise in average wage per capita. In addition, there are no loopback effects in these simulations: thus the fact that the increase in inflation in services caused by the rise in the cost of labour in turn generates a wage revision is disregarded. Finally, the balance of opinion in the business tendency surveys on probable price changes is assumed to be equal to its long-term average, thus cancelling out its impact on the speed of diffusion of the shocks in the simulations.

A +10% shock on the cost of labour leads, in the long term, to a 10% increase in “miscellaneous services” prices and an 8.2% rise in accommodation-catering prices. The speed of diffusion of the shock is significantly higher in accommodation-catering: after one year, the accommodation-catering sector would appear to have transmitted almost 40% of the shock, against 22% for “miscellaneous services”. ●

⁴ Here, average wage per capita in market services is preferred to unit wage costs for better stationarity of the residual and model performance.

⁵ The price of energy does not have a significant impact in the long-term equation.

► 9. Response to a permanent +10% increase in the cost of labour

(cumulated impact in %)

Quarter	1	2	3	4	5	6	7	8	9	10	LT
Prices of "miscellaneous services"	0.00	0.63	1.38	2.22	3.05	3.84	4.56	5.21	5.58	6.32	10.00
Prices in accommodation-catering	0.00	1.00	2.10	3.24	4.43	5.13	5.84	6.42	6.86	7.20	8.20

Note: the simulated increase in the cost of labour corresponds in this simulation to a 10% rise in unit wage costs in market services for the "miscellaneous services" prices against a 10% rise in the average wage per capita adjusted for short-time working in market services for the accommodation-catering prices. The simulations do not include loopback effects resulting from wage increases (the fact that the rise in the price of services contributes in turn to a rise in the cost of labour). The permanent increase takes place in Q1.

How to read it: in response to a permanent 10% rise in the cost of labour, "miscellaneous services" prices are expected to increase by 3.05% after five quarters, and accommodation-catering prices by 4.43%.

Source: INSEE.

Bibliography

Benchekara, N., Marquis, J. and Roulleau, G. (2023) « Consumer prices of food products could slow considerably by the end of 2023 », *Economic outlook*, INSEE, June 2023.

Borio C., Lombardi M., Yetman J., Zakrajsek E. (2023) « The two-regime view of inflation », BIS Papers n°133.

Cavallo, A., Lippi, F. and Miyahara, K. (2023) « Large shocks travel fast », NBER Working Papers n°31659.

De Charsonville L., Ferrière T. and Jardet C. (2017) « MAPI : Model for Analysis and Projection of Inflation in France », Banque de France, Working paper series n°637.

Dias D., Marques C., Martins F. and Santos Silva, J.M.C (2011) « Why are some prices stickier than others ? Firm-data evidence on price adjustment lags », European Central Bank (ECB), Working paper n°1306.

Milin, K. (2017) « Modelling French inflation: a macrosectoral approach », INSEE, Working paper n°G2017/08.

Ulgazi Y. and Vertier P. (2022) « Forecasting Inflation in France : an update of MAPI », Banque de France, Working paper series n°869. ●