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France : Boosting Wages Through Productivity Gains

Compared to 2019, wages in the private sector have grown less robustly than consumer prices, despite the marked acceleration seen in 2022, which particularly supported lower wages. However, this loss in purchasing power of wages does not reflect, for the economy as a whole, a distortion in the added value distribution to the detriment of employees.

The main explanation for this paradox lies in the decrease in average hourly labor productivity, of around 5% since 2019. It could result, for about 80%, from the evolution of the workforce composition, under the effect of massive job creations that took place mainly in relatively less productive sectors, while benefiting relatively less qualified profiles (including apprentices). Moreover, several sectors are facing productivity losses linked to significant transformations in their activity, notably related to the ecological transition, the energy crisis, and the evolution of their global markets.

A second explanatory factor relates to the origin of inflation, a shock of imported prices that spread very quickly into consumer prices, and more slowly into the added value of companies, some sectors having limited margins to increase their prices and, as a result, wages.

The differentiated wage developments between sectors and companies create an incentive for employees to increase their professional mobility. The dynamic of reallocating workers towards more productive companies is a powerful lever for productivity gains for the economy, and thus for purchasing power. It can be encouraged by social dialogue at the sector and company levels.

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Basic Monthly Wages Gradually Accelerate in the Wake of Inflation

The basic monthly wage (BMW) refers to the gross salary usually listed on the first line of the pay slip, before bonuses or additionnal remuneration. It generally depends on the salary scales negotiated at the branch or company level[1]. When the basic monthly wage is close to the statutory minimum wage (SMIC), its recent dynamics have followed that of inflation, due to the SMIC revaluation rules provided by law. Beyond the SMIC, wage negotiations within branches and companies led to a gradual acceleration of the BMW in 2022. **The negotiations held at the end of 2022-early 2023 reinforce this dynamic for 2023, with negotiated increases close to 5% on average[2].**

However, the BMW experiences a weaker progression than the consumer price index (CPI) - a measure that examines the weighted average of prices of a basket of consumer goods and services - compared to the average levels of 2019. **The resulting average loss in purchasing power reaches 1.5 points in the second quarter of 2023 for all employees in non-agricultural sectors.** This loss is primarily explained by the origin of the inflationary shock, triggered by an increase in imported prices, particularly energy. **The rise in consumer prices generally preceded the progression of prices of the companies' added value. This, in turn, forms the basis for wage and margin evolutions.** Indeed, the outcomes of wage negotiations are conditioned by the companies' ability to either adjust their own prices upward in the face of cost inflation, or to reduce their margins, to bear the increase in their wage costs arising from negotiations. Average revaluations are thus higher in the industry and construction sectors than in the services. Finally, agreements resulting from wage negotiations usually foresee stronger revaluations for lower

[1] For further details on measures of wage evolution, see F. Guggemos, *Mesurer l'évolution des salaires à court terme : une palette d'indicateurs statistiques complémentaires*, Blog de l'Insee, octobre 2023.
[2] See notably Erwan Gautier, *Les négociations de salaire dans le conteste de l'inflation*, Bulletin de la Banque de France 245/6, mars-avril 2023.

wages, which have progressed roughly in line with inflation over the last twelve months, and lower for higher wages. **Thus, the loss of purchasing power of the basic monthly wage compared to 2019 mainly concerns executives (-2.9 points), while it has been very limited for blue collar workers (-0.4 point).**

The algebraic comparison between the evolution of basic monthly wages and inflation is not enough to establish the existence of a possible imbalance in wage setting. On one hand, the dynamics of wages involve, alongside inflation, other determinants such as labor productivity or the labor market situation, which can lead to more or less sustainable gains or losses in wage purchasing power. On the other hand, the basic monthly wage represents, by definition, only about 80% of wage remuneration, whereas it is the overall measure of the latter that should be compared to its determinants. The BMW does not include, for example, value-sharing bonuses paid by companies (which amounted to nearly €6.5 billion cumulatively from mid-2022 to mid-2023), nor other remuneration supplements in the form of bonuses, or remuneration for additional or overtime hours.

The Loss in Purchasing Power of Average Wage per Head Does Not Stem from a Distortion in Value Sharing Unfavorable to Employees

The Average Wage per Head (AWH), which is calculated as the ratio of gross wage earnings to the number of employees, provides the right metric for analysis, as it includes all components of employee remuneration. Like the base monthly wage, the AWH across all non-agricultural market branches has experienced a loss in purchasing power since 2019. This loss amounts to 2.5 points between the average situation in 2019 and the second quarter of 2023. It affects all market sectors, except financial services, but its magnitude varies from one sector to another.

The accounting decomposition of the loss in purchasing power of average wages per head, for all non-agricultural market branches, shows that it primarily stems from a loss in hourly labor productivity, of around 4.9 points (see table in appendix). The share of wages in the added value contributes positively to their overall evolution (+0.3%), and more markedly in several sectors. **In the scope of non-agricultural market branches, the accounting analysis of the evolution of real wages thus does not reveal a global imbalance occurring to the detriment of the wage share, except in certain sectors.** The evolution of terms of trade, understood as the gap in evolution of added value prices with the CPI, also contributes to the decline in real wages in some sectors (see below).

Evolution of Wage Metrics (in %)

	BMW* in non-agricultural sectors			AWH** in non-agricultural market branches
	Overall	Blue collars	Executives	
YoY 2020 Q4	1.5	1.6	1.5	1.1
YoY 2021 Q4	1.7	1.6	1.5	1.5
YoY 2022 Q4	3.9	4.7	3.0	4.8
YoY 2023 Q2	4.6	5.3	3.8	4.9
Progression 2019 / 2023Q2	10.9	12.0	9.3	9.8
Progression in Purchasing Power 2019 / 2023Q2	-1.5	-0.5	-2.9	-2.5

Sources: Insee, Dares, Rexecode calculations

* Base Monthly Wage.

** The AWH (Average Wage per Head) series is adjusted for the effects of short-time work.

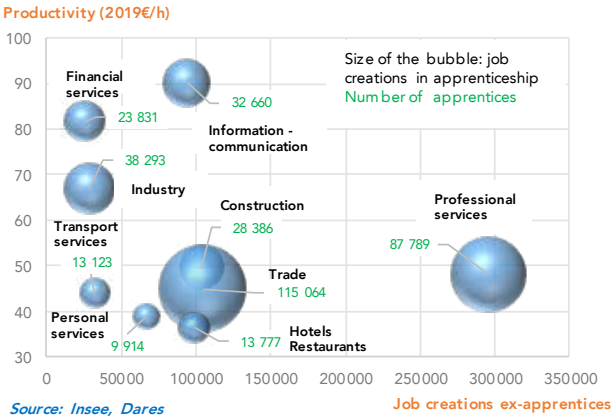
Reading note: YoY stands for year over year change; the average base monthly wage for all employees increased by 4.6% in the second quarter of 2023 compared to the same quarter of 2022; at this date, it stands 10.9% above its average level of 2019; considering the evolution of consumer prices, its purchasing power decreased by 1.5% between 2019 and the second quarter of 2023.

The Decline in Labor Productivity Partly Results from the Evolution of Workforce Composition Between and Within Sectors

The loss of productivity stemming from employment-rich growth on one hand, and differentiated hiring dynamics between sectors on the other, could explain 80% of the productivity loss and, consequently, the corresponding loss in purchasing power of the average wage per head. A third of the 1.2 million jobs created since 2019 were in apprenticeships, which could explain about 2 points of productivity loss. The remaining two-thirds were primarily in sectors with lower productivity levels than the market economy's average: this composition effect between sectors could explain 1 point of the overall productivity loss. Moreover, some job creations coincide with the sharp drop in unemployment rate and the increase in employment rate since 2019. The workers' profiles of these new jobs generally correspond to lower levels of labor productivity due to lower levels of qualification, experience, or the effects

of prolonged distancing from the labor market. Assuming that 50% of jobs created outside apprenticeships are at 50% of the average productivity of the hiring sectors, this effect would explain an additional point of productivity loss[3].

Sectoral Localization and Nature of Jobs Created Between 2019 and Mid-2023



Source: Insee, Dares

Reading: Between 2019 and mid-2023, the industry created approximately 38,000 apprenticeship jobs and 29,000 non-apprenticeship jobs.

Added to this are sectoral factors of productivity loss, which refer to specific shocks as well as more structural transformations. Several sectors were affected, especially in 2021 and 2022, by supply-chain difficulties that seem to be resolving in 2023. Energy-intensive sectors, notably chemistry, were penalized by the rise in energy prices. Meanwhile EDF had to reduce its electricity production due to technical problems encountered in the maintenance of its nuclear plants. Several sectors are undergoing transformations in their activity, notably construction, with the ramping up of renovation, more labor-intensive than new construction, resulting in productivity losses. The evolution of product ranges, in the automotive sector with the dismantling of certain production sites for thermal vehicles, or in aerospace, with the end of A380 production, may also have affected productivity.

These sectors have rather chosen to maintain their staff and preserve wages, which led to a clear distortion of value sharing in favor of employee remuneration. This is particularly the case for the transport equipment sector, and to a lesser extent for construction and other industrial branches. When a catch-up in production is envisaged, as in the case of EDF for electricity production, the productivity loss is expected to be absorbed, opening up the field for a revival of wage dynamics. Conversely, if the productivity loss is permanent, an adjustment might occur at the employment level or in the form of wage moderation, to restore economic balance.

Overall, the loss in purchasing power of the average wage per head corresponding to a decrease in productivity has very different implications depending on whether it arises from the creation of new jobs allowing less qualified individuals to enter the labor market, or whether it results from a transformation in the ways wealth is generated. In the former case, it's essentially a compositional effect, which actually masks an increase in aggregate-produced wealth as well as living standards for all individuals. In the latter case, on the contrary, the lesser creation of wealth may result in a slowdown in employment and wages.

In several sectors, wages are constrained by the decrease in the relative prices of the added value, which serves as a basis for value sharing

At the root of the inflationary surge burdening the purchasing power of wages are the import price shocks that hit the French economy starting from 2021: initially, the sharp increase in energy prices and other raw materials, then gradually the appreciation of all imported goods. The diffusion of imported price shocks is not homogeneous in the economy: it depends on the supply-demand balance conditions of each market, all along the value chains. Some sectors thus saw their prices increase in line with their costs, sometimes even more in situations of supply deficit, while other markets experienced less favorable price dynamics, especially when their outlets negatively adjust to price hikes[4].

The resulting added value price dynamics, differentiated between sectors and enterprises, impact wages and margins. When a company's added value price has risen faster than consumer prices, it means there is a relative improvement in the purchasing power of its added value, in other words, the combined purchasing power of wages and margins is enhanced. This is particularly the case for sectors that could benefit, due to their competitive position or the evolution of prices in the markets they supply, from an immediate improvement for some, more progressive for others, in their terms of trade. These sectors include : energy-water-waste management, agri-food industry, transport services, construction, trade, real estate services.

[3] Under other assumptions, this effect could be more significant and explain a part of the deviation from the productivity trend before 2019.
[4] Axelle Arquié, Malte Thie, *Energy, Inflation and Market Power: Excess Pass-Through in France*, CEPII Working Paper, n° 2023-16, September 2023.

The opposite occurred in sectors that were not able to sufficiently increase their prices. The loss in purchasing power of added value, which is then shared between labor and capital suppliers during wage negotiations, is likely to curb wages relative to consumer prices

There is an identity between productivity gains and gains in purchasing power of average wage per head over time

The above analysis shows, on one hand, that wages progressively adjust to the rise in consumer prices, without a manifest imbalance in the global value sharing to the detriment of employees appearing. On the other hand, the loss in purchasing power of the average wage per head is largely explained by the deformation of job structures due to strong job creations favoring young people, notably apprentices, and less qualified individuals. These composition effects do not translate into purchasing power losses at the employee level, who benefit from stronger wage dynamics the lower they are on the wage scale. However, given the productivity losses associated with the transformation of the productive apparatus and the imported nature of the inflationary shock leading to a deterioration of the terms of trade for several sectors, a loss in purchasing power is expected to remain for the affected sectors. Additionally, the trend of slowing productivity gains observed over the past decades suggests a low progression of real average wages per head for the upcoming period. **These findings question the levers to activate to reinvigorate productivity gains, which are the primary determinant of wage purchasing power.**

The mobility of labor from less productive to more productive enterprises is a powerful lever to promote labor productivity gains. This is one of the main lessons of the Report on the productive fabric by OFCE[5], which shows that most of the productivity gains have occurred through the reallocation of production factors over the past decade. **Wage disparities play a role as price signals and are likely to encourage a reallocation of workers from less productive to more productive companies and sectors.** In terms of public policy, this particularly refers to geographic mobility issues, especially at the level of supply of housing, transportation, and family services.

At the enterprise level, employees' productivity gains can be encouraged by optimizing the fiscal-social wedge. At certain wage levels, the degressivity of the French tax credit for low income workers (« prime d'activité ») then the progressivity of the income tax on one hand, and the degressivity of employer contribution reductions on the other, have the combined effect of making labor cost grow much faster wage disposable income[6]. This situation can give rise to low wage traps or promotion traps for employees by incentivizing, from a strictly financial point of view, the employee to prefer converting their productivity gains into leisure time rather than remuneration, or the employer to favor the hire of less qualified and less experienced workers. This risk is reinforced when wage scales are compressed as it is the case today after strong revaluations of the SMIC. Value sharing schemes can also elicit productivity gains, as they complement the toolbox of employers alongside wages and bonuses.

Lastly, the labor cost is a determinant of company competitiveness, and thus conditions the sustainability of wage gains. When economic profitability conditions are no longer ensured, employment generally serves as an adjustment variable, especially when companies must cease their activity or restructure their productive apparatus to continue their activity. Over the past decades, French public authorities have regularly intervened to support wage purchasing power, but this support occurred to the detriment of employment, especially that of less qualified workers, which then justified social contribution reduction policies to correct these effects. **Branches and companies must therefore find the right balance between revaluing their wage scales, and controlling labor cost, which remains higher in France than in most European countries. Wage discussions at the level of different branches must also ensure that the competitiveness of companies most exposed to international competition is not weakened.**

[5] Sébastien Bock, Aya Elewa, Sarah Guillou, *Comprendre le tissu productif marchand en France : une analyse de la décennie passée*, Policy brief de l'OFCE, n° 119 septembre 2023.
[6] M. Sicsic, G. Vermersch, *Les incitations monétaires au travail sont plus élevées en 2019 qu'en 2014*, Insee Analyses n° 66, juillet 2021.

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Annex

Decomposition of the Evolution of the purchasing power of the Average Wage per Head into its Determinants between the Average Levels of the Year 2019 and the Levels of the Second Quarter 2023 (in %)

	Purchasing Power of AWH	Terms of Trade	Social Wedge	Share of Wages	Hours per Head	Hourly Productivity
Entire non-agricultural market sectors	-2,5	1,6	0,7	0,3	0,0	-4,9
Food Industries	-4,6	18,8	0,3	-12,1	0,0	-8,9
Equipment goods	-2,3	-1,2	1,0	-0,4	-0,6	-1,1
Transport equipment	-1,4	-1,2	1,3	25,6	-0,2	-21,5
Other industrial sectors	-1,5	-0,2	0,3	1,7	-0,7	-2,5
Energy, water, waste	-4,4	98,7	2,2	-47,2	0,7	-11,6
Construction	-4,1	10,1	0,1	2,7	-0,5	-14,9
Trade	-1,8	3,0	0,3	-0,7	0,0	-4,3
Transport services	-3,0	15,4	1,1	-3,2	0,9	-14,9
Hotels and restaurants	-2,1	-14,7	1,5	30,0	1,0	-13,9
Information-communication	-1,4	-15,4	0,7	9,2	0,9	5,1
Financial services	0,8	-19,3	1,5	20,0	1,3	1,2
Real estate services	-5,5	1,1	0,3	-3,6	0,6	-3,9
Professional services	-3,7	-4,0	0,3	2,5	-0,3	-2,2
Personal services	-1,9	-14,9	1,4	17,5	-1,2	-2,0

Source: Insee, national accounting, Rexecode calculations

Note: The purchasing power of the average wage per head (AWH), defined as the ratio between the AWH and the consumer price index (CPI), can be accountably decomposed as the product of the following quantities: terms of trade (= added value deflator / CPI), social wedge (= gross wage bill / remunerations), share of wages (= remunerations / added value), hours per head and hourly productivity. The evolution of the purchasing power of the AWH results from the evolution of these components.