



The French Policy of Payroll Tax Reductions

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France faces a twofold problem: high unemployment concentrated on the least qualified and a faster decline in market shares than in other European countries. In both cases, the situation has recently stopped deteriorating, but the signs of improvement are still tenuous. In both cases also, the cost of labour was to be blamed. Recent employers' payroll tax cuts, such as the *Crédit d'impôt compétitivité emploi* (CICE, Competitiveness and Employment Tax Credit) and the *Pacte de responsabilité* (Responsibility Pact), have pursued a dual objective of reducing unemployment and improving price competitiveness. The first objective would push for concentrating cuts on payroll taxes on low wages while the second would push for going beyond low wages. However, the risk of using a single instrument of payroll tax reductions to achieve two objectives is to dilute its effectiveness. We consider that this was certainly the case for the CICE and the *Pacte de responsabilité*.

The starting point that favours extending the reductions in payroll taxes to wages above 1.6 SMICs (the French minimum wage) in order to support exporting firms is verified: wages below this threshold constitute a small part of their costs and are lower than the rest of the economy. However, this is no longer true if we take into account the fact that these firms buy services and goods that incorporate lower wages. We also recall that the German competitiveness strategy of the 2000s was

more a decline, or moderation, of labour costs in low-wage sectors (services) than in the manufacturing sector. Using very detailed company data, we show in this Note that labour cost reductions, when they are not in the form of a tax credit and when they are concentrated on low wages, do have a positive impact on employment. We also find that they can, under certain conditions, help the competitiveness of exporting firms. Reducing payroll taxes on low wages is therefore first and foremost an employment policy that can also improve our competitiveness. We do not find any “diminishing returns” from these payroll tax decreases over time. However, since all these employer contributions will have been eliminated at the SMIC level by the end of 2019, this strategy to reduce labour costs has reached its limit. The reductions in social security contributions on higher wages (above 1.6 SMICs) have not yet proved their effectiveness: we do not find a positive impact on exports, although they were largely motivated by a competitiveness objective.

These results argue in favour of perpetuating the reductions in payroll taxes on low wages, which is partly the case with the transformation of the CICE, a tax credit, into simple reductions in payroll tax. We recommend that labour cost reductions above the 1.6 SMICs threshold be reduced or eliminated if future evaluations confirm disappointing results of this policy on both employment and exports.

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Whither labour costs in France?

France's price competitiveness deteriorated sharply between 2000 and 2008, particularly vis-à-vis Germany, which largely explains the poor export performance over this period.¹ Since then and especially since 2013, cost competitiveness has improved, partly due to higher wage increases in Germany than in France and to lower labour cost policies in France. The profit rates of firms in the manufacturing sector followed a similar dynamic. In addition, the number of French exporters fell sharply until 2012 and then stabilized. However, real effective exchange rate analyses by the International Monetary Fund (IMF), the *Centre d'études prospectives et d'informations internationales* (CEPII, Center for Research and Expertise on the World Economy) and the *Observatoire français des conjonctures économiques* (OFCE, French Economic Observatory)² conclude that there is still a price competitiveness gap, which is explained both by an undervaluation of Germany of around 15% and an overvaluation of France of around 10%. Within the euro zone, adjustment can no longer be made through the exchange rate and is done *through* price adjustments. France's price competitiveness deficit has therefore not disappeared, although it has narrowed and is partly due to an insufficient upward adjustment of German wages. Over the recent period (since 2008), however, competitiveness excluding costs, which can be linked to quality, the move upmarket, niche positioning... of France's products, seems to have deteriorated,³ partly explaining why France's market share has not recovered.

Average costs

In all business sectors, the average hourly labour cost in France in 2017 was 36 euros, placing France among the European countries with the highest labour costs: in all eurozone countries, it was 30.30 euros, almost 20% lower than in France and 34.10 euros in Germany, 5% lower. However, this observation conceals many heterogeneities.

The first source of labour cost variance is related to the type of business sector considered. In industry, the average hourly cost in France is now lower than in Germany (38.8 compared to 40.20 euros in 2017), while it is significantly higher in France in the service sector and in construction. Germany differs from other European Union countries not by a low labour cost in industry but rather by an unparalleled gap between the cost of labour in industry and services.

This is a point on which recent work by economists⁴ insists: the German competitiveness strategy was first built on a reduction in labour costs in sectors sheltered from international competition and, in particular, in services, much more so than in the manufacturing sector, especially over the period 1995-2007. The German manufacturing sector has therefore benefited strongly but indirectly (*through the* purchase of inputs) from wage moderation in other sectors. This has been made possible by the decentralisation of labour market institutions and the creation of mini-jobs.

Since 2012, the hourly wage cost has increased moderately in France. In industry, it increased by 1.3% in current euros per year, compared with 2.7% in Germany, due to more dynamic wages over the period and a series of measures taken in France to reduce the non-wage component of labour costs. Thus, labour costs have slowed in France with the creation of the *Crédit d'impôt compétitivité emploi* (CICE, Competitiveness and Employment Tax Credit) in 2013, and the *Pacte de responsabilité* in 2015 (see Box 1).

Hourly labour costs in 2017, in euros

	Market sectors	Industry	Services	Construction
Eurozone	30.3	33.4	29.3	26.7
Germany	34.1	40.2	31.5	28.2
Belgium	39.6	44.8	41.1	34.7
Spain	21.2	23.3	20.0	20.0
France	36.0	38.8	36.4	32.3
Italy	28.2	27.8	27.4	23.2
Netherlands	34.8	36.8	32.9	35.3
United Kingdom	25.7	24.2	25.2	25.4

Source: Eurostat.

Heterogeneity by qualification level

However, the comparison of average costs provides only partial insight, as it does not take into account the level of qualification. For the least skilled workers, the hourly cost of labour at the minimum wage level has been at the same level in France and Germany since 2017 (where the two hourly

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¹ See Bas M., L. Fontagné, P. Martin and T. Mayer (2015): "À la recherche des parts de marché perdues", *CAE Note*, no. 23, May; Camatte H. and G. Gaulier (2018): "Spécialisation sectorielle et la rechute du commerce extérieur français entre 2014 et 2016", *Bloc-Notes Éco*, Banque de France.

² Gaulier G. and V. Vicard (2018): "La déplaisante arithmétique des déséquilibres de la zone euro", *La Lettre du CEPII*, no 385, February; Ducoudré B. X. Timbeau and S. Villemot (2018): "Taux de change d'équilibre et ampleur des désajustements internes à la zone euro", *Revue de l'OFCE*, no 156.

³ See Bas *et al* (2015), *op. cit.*

⁴ Dustmann C., B. Fitzenberger, U. Schönberg and A. Spitz-Oener (2014): "From Sick Man of Europe to Economic Superstar: Germany's Resurgent Economy", *Journal of Economic Perspectives*, vol. 28, no 1, pp. 167-188.

1. History of reductions in social security contributions

The first measures to reduce employers' social security contributions taken from 1993 onwards focused on low wages, below 1.3 SMICs. They were then extended in the early 2000s to compensate for the increase in labour costs due to the reduction in working time (to 35 hours), and then unified in the "Fillon" scheme in 2005 by setting the threshold for leaving the scheme at 1.6 SMICs.

In 2013, the *Crédit d'impôt compétitivité emploi* (CICE, Competitiveness and Employment Tax Credit) scheme took the form of a corporate tax credit rather than a social security contribution exemption. It covers a higher wage range: in 2013, it corresponds to 4% of the wage bill up to 2.5 SMICs, then rises to 6% of the wage bill for the same wage brackets in 2014, rises to 7% in 2017 and drops again to 6% in 2018.^a

In 2015, the *Pacte de responsabilité* (Responsibility Pact) extends the effort to reduce labour costs, with a 1.8 points reduction in social security contributions to 1.6 SMICs, then to 3.5 SMICs in 2016.

The transformation of the CICE into a payroll tax reduction announced for January 2019 is broadly neutral as regards the level of relief received by firms, with the exception of the effect of extending the scope (non-profit sector).^b It leads to an increase in the corporate tax rate, which is partly offset by an additional 4% reduction in social security contributions at the SMIC level (with an exit point of 1.6 SMICs).

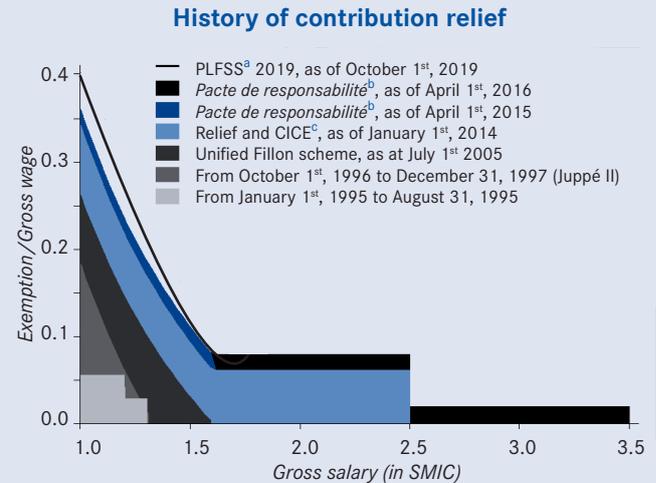
The annual cost to public finances of these general social security contribution relief schemes would be close to €60 billion at the end of 2019. Based on the forecasts presented in the report for the 2019 Social Security budget bill, the following breakdown can be made:

^a It is increased on an *ad hoc* basis to 7% of the wage bill in 2017 and then to 6% in 2018.

^b For a study of the budgetary impact of this "switchover" from the tax credit system to simple expense reductions, see Ducoudré B. (2017): "Évaluation du remplacement du CICE par une baisse des cotisations sociales patronales", *OFCE Policy Brief*, July; Bozio A., S. Cottet and C. Malgouyres (2018): "Quels effets attendre de la transformation du CICE en réductions de cotisations employeurs?", *Note IPP*, no 36, October.

costs amounted to 10.41 and 10.56 euros respectively). In 2019, the hourly cost of labour in France is expected to decrease relative to the German cost. First, the effort to reduce labour costs will continue in France, with a further reduction of around 4 points in social security contributions at the minimum wage level as from October 2019. Secondly, the German minimum wage will be increased by 4% on January 1st, 2019. However, this comparison does not take into account mini-jobs with low social contributions.

By using data from the *Structure of Earnings Survey* (SES) conducted by Eurostat and the OECD *Taxing Wages* model, a more detailed analysis of labour costs can be carried



Reading: ^a Social Security budget bill; ^b Responsibility Pact; ^c Competitiveness and Employment Tax Credit.

Source: Authors.

- General reductions in social security contributions between 1 and 1.6 SMICs ("Unified Fillon"): 24 billion euros in 2019;
- CICE "switched" in reduction of 6 points of social security contributions between 1 and 2.5 SMICs: 22 billion euros in 2019;
- 2015 *Pacte de responsabilité* (exemption of 1.8 points from social security contributions between 1 and 1.6 SMICs): 4 billion euros in 2019;
- 2016 *Pacte de responsabilité* (exemption of 1.8 points from social security contributions between 1.6 and 3.5 SMICs): 4 billion euros in 2019;
- Additional reduction of 4 points in social security contributions at the SMIC level, then decreasing to 1.6 SMICs: full year effect of 3.5 billion euros at the end of 2019.

out particularly by qualification level. This allows to shed more light on France's situation in relation to its partners with regard to the cost of skilled labour, which has more weight in the exporting sector (see *below*). In particular, two sectors of activity, manufacturing industry and specialized, scientific and technical activities, are studied for two categories of qualification: qualified technical professions of the engineering type on the one hand, and intermediate professions of the technician type on the other hand (see Paris, 2019).⁵

This analysis reveals that, in these sectors in 2014 (latest available data), France does not seem to have a problem in

⁵ Paris H. (2019): "Les coûts du travail des professions intermédiaires et qualifiées", *Focus du CAE*, no 029-2019, January.

terms of competitiveness of the labour costs of intermediate professions (in France between 1.5 and 3.5 SMICs). This is so if the specific cases of Spain and the United Kingdom are excluded. On the other hand, the situation seems less favourable for qualified professions such as engineers or administrative managers, for whom France (where gross wages range from 2.5 to 5-6 SMICs), like Belgium, generally has higher labour costs than its partners. For example, for engineers in manufacturing industry, France, Belgium and Germany have comparable and higher compensation of employees than their partners on the intermediate deciles, but France has higher costs than Germany and Belgium on the higher deciles, which should correspond *a priori* to the most qualified engineers. This less favourable position of France is due, on the one hand, to the profile of social security contributions (they are capped in other countries at higher wages) and, on the other hand, to the level of gross wages in France of skilled professions, which are on the high average of the panel.⁶

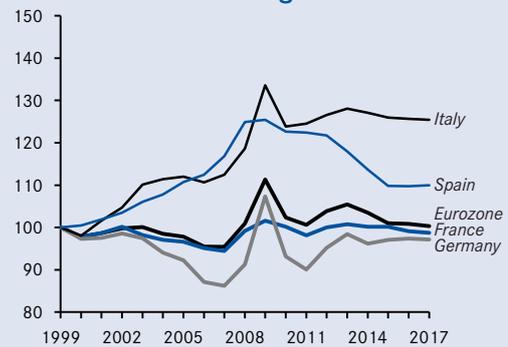
The evolution of French unit labour costs compared to other European countries

Comparing labour costs across countries is not sufficient to assess a country's relative competitiveness: high labour costs are not an obstacle to competitiveness if the cost per unit produced remains low due to high labour productivity. This is why cost competitiveness is generally based on unit labour costs (ULC), which relates the total cost of labour to real production. ULC are one of the main determinants of price competitiveness, along with the pricing strategies of firms and mark-ups determination as well as exchange rate fluctuations. ULC are most often computed for the manufacturing industry only (more relevant for international comparison) and in relative terms from one country to another (so as to take into account the sectoral diversification of export). Nevertheless, the evolution of the ULCs in other sectors is important because it affects the prices of intermediate goods and services in the exporting sectors (see below).

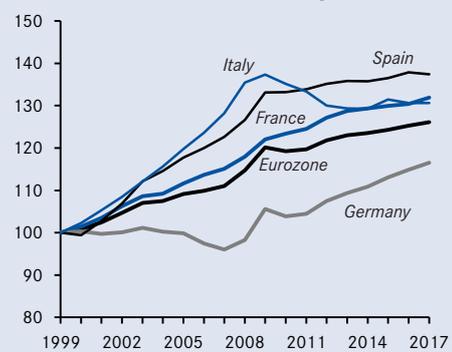
Taking 1999 as reference point (start of the euro, limited trade imbalances for the main economies), the comparative evolution of unit labour costs (in nominal terms) is quite different depending on whether we consider manufacturing industry alone or the economy as a whole (Graph 1). In the manufacturing sector, ULCs remained relatively stable in France throughout the period, except for the peak observed during the Great Recession. This means that labour costs moved broadly in line with productivity. In contrast, Germany and Italy have opposite situations: unit labour costs increased strongly in Italy throughout the period, due to low gains or even

1. Evolution of nominal unit labour costs base 100 in 1999

a. Manufacturing sector



b. Total economy



Source: OCDE.

loss of productivity, while Germany saw its unit labour costs fall before the crisis, mainly as a result of wage moderation resulting from trade union agreements and the introduction of the Hartz reforms. From 2012 onwards, unit labour costs increased in Germany, due in particular to the negotiation of branch agreements on wage increases, but also to the introduction of a minimum wage in January 2015. For the economy as a whole, the growth of ULCs in France exceeded that of the euro zone over the entire period. Wages in the market services sector in France have increased at the same rate as those in manufacturing industry, with significantly lower productivity gains. This contrasts with Germany, where the strong wage moderation in the 2000s led to a much lower increase in unit labour costs until 2008.

In addition to unit labour costs, price competitiveness also strongly depends on exchange rate developments and on firms' mark-ups strategies. In France, the deterioration in cost competitiveness, particularly vis-à-vis its main competitor, Germany, has prompted firms to reduce profit margins to limit the loss of price competitiveness.⁷ It is this phenomenon that

⁶ However, the cost of labour can be significantly reduced for firms employing skilled employees assigned to research and development operations (such as researchers and technicians) through the Research Tax Credit (CIR). The CIR is equal to 30% of research expenditure less than or equal to €100 million and 5% for expenditure over €100 million.

⁷ Ciornohuz C. and M. Darmet-Cucchiari (2014): "Comment l'évolution des coûts salariaux unitaires en France se situe-t-elle par rapport aux partenaires de la zone euro ?", *Trésor-Eco*, no 134, September.

led some to consider that “danger zone had been reached”, as mentioned in the Gallois Report in 2012: “in order to maintain competitive prices, French industries were forced to cut their margins, which fell from 30% to 21% over the period 2000-2011, while they increased by 7 points in Germany”. According to the same report, this resulted in a damaging lack of investment in productivity and innovation in the production process.

Payroll tax cuts: what impact on employment?

History and theoretical foundations

Measures to reduce employer payroll taxes on low wages have grown in France over the past twenty years, with the primary objective of supporting the creation of low-skilled jobs by the private sector. These measures are both general, in the sense that they concern all firms in the private sector, while being targeted on low-wage workers with eligibility thresholds that have gradually been raised over time. There are three theoretical reasons why a reduction in taxes on labour has an even greater impact on employment if it is targeted on low wages.⁸ The first reason is of purely accounting nature and corresponds to a base effect. An exemption of a given monetary amount reduces the percentage of labour costs even more if it is concentrated on low wages. Even if the elasticity of labour demand was the same at all wage levels, the effect on the number of jobs created increases with concentration of the exemption on low wages. The second reason corresponds to the fact that the elasticity of employment to labour cost decreases (in absolute terms) with wages: labour cost importance as a determinant of labour demand decreases as wages increase. First, the possibilities of substitution between low-skilled labour and capital are strong, while on the contrary, skilled labour and capital are rather complementary. Second, low wages are over-represented in sectors of activity where cost reductions are strongly reflected in prices and not in margins, which has a greater effect on production volume and employment. The third reason is that an exemption from payroll taxes can also generate an increase in wages, which reduces the effects on employment. Because the SMIC strongly constrains adjustments of low wages, the targeted reductions very close to the SMIC are on the contrary almost completely translated into reductions in labour costs.

Empirical results support the theoretical analysis

Payroll tax reductions have been evaluated by many papers, both through *ex ante* studies based on theoretical models and by *ex post* studies using microeconomic firm level data.⁹ Each generation of payroll tax reduction has thus been the subject of a specific evaluation.

The first generation of measures is the one taken by Édouard Balladur and Alain Juppé to target wages below 1.3 SMICs. It was assessed in the study by Crépon and Desplatz (2001)¹⁰ which found a very positive effect on employment, consistent in scope with the results obtained at the same time by Kramarz and Philippon (2001)¹¹ who assessed the effects of minimum wage increases on employment. In these initial studies, the elasticity of labour demand at its cost is estimated at around -1.5 at the level of low wages. The work carried out by the *Institut des politiques publiques* (IPP, Institute of Public Policy)¹² for this *Note* on the same Juppé scheme confirms this order of magnitude. We thus verify that firms, whose wage structure was concentrated on low wages, reacted positively to the Juppé payroll tax reductions by strongly increasing employment (as well as production): a 1% drop in labour costs on low wages leads firms in the manufacturing sector to increase employment by 1.7%. In the past, therefore, payroll tax cuts have been an effective employment policy.

The second generation of payroll tax reductions benefited firms, which moved to the reduced 35 hours per week worktime limit between 1998 and 2002. It was extended to all firms as part of the 2003-2005 Fillon reform, which widened the eligibility window to 1.6 SMICs. Evaluations carried out on firm level data conclude that there is a positive effect on employment, but on a smaller scale, with elasticities close to -0.5 .¹³ In 2009, the deepening of the tax relief for firms with less than 10 employees, known as “zero charge”, estimated very high elasticities of job creation at labour cost close to -2.5 .¹⁴ However, the elasticity expressed here refers to hiring flows (not employment levels) and its value is therefore not directly comparable to that of other evaluations.

With the implementation of the tax credit policy CICE, the evaluation work of the *Laboratoire interdisciplinaire d'évaluation des politiques publiques* (LIEPP, Interdisciplinary Laboratory for the Evaluation of Public Policies) and the *Travail, emploi et politiques publiques* (TEPP, Research Laboratory

⁸ See Bunel M., C. Emond and Y. L'Horty (2012): “Évaluer les réformes des exonérations générales de cotisations sociales”, *Revue de l'OFCE*, no 126, pp. 59-103; Lehmann E. and Y. L'Horty (2014): “Renforcer la progressivité des prélèvements sociaux”, *Revue Française d'Économie*, vol. 29, no 1, pp. 25-61.

⁹ For an overview of these studies, see Ourliac B. and C. New (2012): “Les allègements de cotisations sociales patronales sur les bas salaires en France de 1993 à 2009”, *Document d'Étude de la DARES*, no 169.

¹⁰ Crépon B. and R. Desplatz (2001): “Une nouvelle évaluation des effets des allègements de charges sociales sur les bas salaires”, *Économie et Statistique*, no 348, pp. 1-24.

¹¹ Kramarz F. and T. Philippon (2001): “The Impact of Differential Payroll Tax Subsidies on Minimum Wage Employment”, *Journal of Public Economics*, vol. 82, no 1, pp. 115-146.

¹² Malgouyres C. (2019): “Coût du travail et exportations : analyses sur données d'entreprises”, *Rapport IPP*, no 20, January, p. 82.

¹³ Bunel M., F. Gilles and Y. L'Horty (2010): “Les effets des allègements de cotisations sociales sur l'emploi et les salaires : une évaluation de la réforme de 2003”, *Économie et Statistique*, no 429-430, pp. 77-105.

¹⁴ See Cahuc P., S. Carcillo and T. Le Barbanchon (2014): “Do Hiring Credits Work in Recessions? Evidence from France”, *IZA DP*, no 8330.

on Work, Employment and Public Policies) commissioned by France Stratégie converge to indicate a low impact in terms of jobs created, with low or zero elasticities.¹⁵ However, the CICE evaluation conducted by the LIEPP team showed that the implementation of a poorly targeted scheme such as CICE, which extends to 2.5 SMICs, was accompanied by an increase in wages, a result also confirmed by the TEPP evaluation. The increase in wages was not identified at the individual level but at the firm level. This cannot therefore establish a direct link with employees “eligible” to the CICE. The CICE may thus have been redistributed in part in the form of wage increases, mainly for the benefit of executives, higher intellectual professions and intermediate professions. The authors of the LIEPP study conclude that there is an indirect effect distributed among employees according to their specific characteristics, their bargaining power in particular, but not their eligibility for the CICE. Other work on French data has shed light on the impact of employer social security contributions on wages, highlighted only at the individual level in some cases, but without rejecting it more generally at the level of firms.¹⁶

The IPP’s assessment of the 2015 *Pacte de responsabilité* estimates a high elasticity, close to -2.5 , for a measure that reduces labour costs up to the threshold of 1.6 SMICs. It indicates a positive impact on employment for both manufacturing firms and the rest of the economy, but it is more robust for manufacturing firms that had higher than median self-financing capacity, or initial profitability. For these firms, the employment impact of the cost reductions is similar to or even higher than the Juppé cost reductions. One possible interpretation is that firms would have first used the payroll tax reductions to improve their profit margins. On the other hand, those with sufficient margins, and therefore not financially constrained, responded to the decrease in labour costs, as predicted by economic theory, by increasing employment and output. This suggests the possibility that with restored profit margins the employment impact, at least in the manufacturing sector, will now be stronger.

Other macroeconomic mechanisms also come into play: effects on public finances, price formation and external balance. A recent study by the OFCE,¹⁷ also carried out as part of France Stratégie’s evaluation of the CICE, nevertheless indicates that these various macroeconomic effects tend to compensate each other. The study integrated into a macroeconomic model the

results of the estimates of the employment and wage effects of the CICE obtained by the TEPP team on microeconomic data in order to carry out simulations for the years 2013 to 2015. The conclusion is that 80% of the employment effect of the CICE would be linked to the direct effect on firms benefiting from the measure and estimated by the *ex post* evaluation on individual firm level data.

These results converge to indicate that the magnitude of the effects on employment depends on the ability of tax relief to translate into an effective reduction in labour costs. The more they affect high wage levels, the more tax cuts potentially have an inflationary effect on wages. The evaluation work on firm level data still finds positive effects for payroll tax reductions measures targeted up to 1.6 SMICs, but the effects become very small and insignificant at the 2.5 SMICs threshold (see Graph 2). Admittedly, as exemption measures at the level of the minimum wage have been deepened, it has become necessary to widen the exemption window to wage levels that are ever further away from the minimum wage. However, this development is due to the desire to maintain a reasonable slope to the exemption schemes, in order to avoid setting up low-wage traps and hindering wage growth. On the basis of these estimates, we can quantify the *expected* impact on employment of the additional 4 percentage points reduction in social security contributions from October 1st, 2019 (between 1 and 1.6 SMICs): between 80,000 and 200,000 jobs would be created or safeguarded depending on the elasticity chosen.¹⁸ Despite the uncertainties associated with these estimates, it is interesting to compare them with those resulting from the *ex post* evaluation of the CICE: 100,000 jobs created or safeguarded at a budgetary cost almost six times higher.

Recommendation 1. With regard to the sole objective of supporting employment and reducing unemployment, the government should give priority to payroll tax exemptions targeted on low wages and should eliminate all payroll taxes at the SMIC level.

Beyond targeting low wages, implementation conditions of reforms aimed at reducing labour costs can contribute to altering their effects on employment. The instability of schemes designed to change long-term choices does not

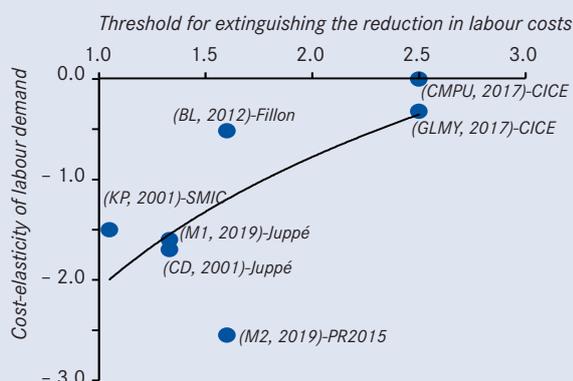
¹⁵ The employment effect is nil for the assessment conducted by LIEPP. It is positive but low for the evaluation of PEP. See Carbonnier C., C. Manguyres, T. Mayer, L. Py and C. Urvoy (2017): *Évaluation interdisciplinaire des impacts du CICE en matière de compétitivité, d’investissement, d’emploi, de profitabilité et de salaires*, Rapport du LIEPP, SciencesPo, March and Gilles F., Y. L’Horty, F. Mihoubi and X. Yang (2017): “Les effets du CICE sur l’emploi, les salaires et l’activité des entreprises : une nouvelle évaluation *ex post* pour la période 2013-2015”, *Rapport de Recherche TEPP*, no 17-04.

¹⁶ See Bozio A., Breda and Grenet (2018): *Tax-Benefit Linkage of Social Security Contributions: Evidence from France*, Mimeo IPP. This study shows that the incidence of social security contributions varies according to the type of contribution. The study of successive episodes of capping of social security contributions in France during the 1990s shows that the employee’s salary is negatively affected by an increase in social security contributions when the employee is directly entitled to them (typically future pension rights), while this expense is borne by the employer, without any impact on salary, when the links between the contribution and the employee’s benefits are more tenuous (non-contributory contributions).

¹⁷ Ducoudré B. and N. Yol (2018): *Évaluation de l’impact du CICE par une méthode hybride et l’utilisation de l’information macro-sectorielle*, OFCE Report for France Stratégie, September.

¹⁸ With an elasticity around -0.5 (“BL-Fillon”), 80,000 annual jobs would be created or safeguarded; with an elasticity closer to the trend curve (average of “BL-Fillon” and “M2-PR2015”, i.e. 1.25), this figure increases to over 200,000 jobs.

2. Cost-elasticity of labour demand: *ex post* evaluation on individual micro-data of firms



Reading: Each point in the graph corresponds to the central result of an *ex post* evaluation on company micro-data. The horizontal axis corresponds to the extinction threshold of the labour cost reduction measures that were evaluated by each study. The vertical axis gives the average elasticity of labour demand at its cost, estimated in each study.

Sources: (BL, 2012) Bunel M. and Y. L'Horty (2012): "The Effects of Reduced Social Security Contributions on Employment: An Evaluation of the 2003 French Reform", *Fiscal Studies*, vol. 33, no 3; (CMPU, 2017) Carbonnier C., C. Malgouyres, T. Mayer, L. Py and C. Urvoz (2017): *Évaluation interdisciplinaire des impacts du CICE en matière de compétitivité, d'investissement, d'emploi, de profitabilité et de salaires*, Rapport du LIEPP, SciencesPo, March; (CD, 2001) Crépon B. and R. Desplatz (2001): "Une nouvelle évaluation des effets des allègements de charges sociales sur les bas salaires", *Économie et Statistique*, no 348; (GLMY, 2017) Gilles F., Y. L'Horty, F. Mihoubi and X. Yang (2017): "Les effets du CICE sur l'emploi, les salaires et l'activité des entreprises : une nouvelle évaluation *ex post* pour la période 2013-2015", *Rapport de recherche TEPP*, no 17-04; (KP, 2001) Kramarz F. and T. Philippon (2001): "The Impact of Differential Payroll Tax Subsidies on Minimum Wage Employment", *Journal of Public Economics*, vol. 82, no 1, October; (M1, 2019) and (M2, 2019) Malgouyres C. (2019): "Coût du travail et exportations : analyses sur données d'entreprises" », *Rapport IPP*, no 20, January.

contribute to their understanding by employers. However, since 2012, there has been a succession of reforms at a high pace. In 2013, the CICE took the form of a tax credit rather than a simple and previously experienced payroll tax reduction. Its scale has been modified three times, in 2014, 2017 and 2018. The *Pacte de responsabilité*, which was added to the CICE and to the general payroll tax exemptions in 2015, was amended and extended in 2016. With the CICE's transformation in 2019 into simple payroll tax exemptions, major changes in rates and contribution rates will again be introduced. This instability is reminiscent of the 1990s, when the first exemption schemes were implemented and were being reformed every 18 months. "The policy of reducing labour costs from 2012 to 2018 was

characterised by the piling up of devices and the permanent modification of rates"¹⁹ which is not a guarantee of efficiency. The transformation of the CICE into lower payroll taxes in 2019 will help to simplify the policy. It is desirable to take advantage of this reform to seek lasting solutions to stabilise the measures and their rates in the future, in particular those targeted at wages below 1.6 SMICs, whose effectiveness has been demonstrated.

Recommendation 2. Achieve lasting stability in measures to reduce labour costs on low wages in order to put an end to the piling up of reforms.

After the planned removal in October 2019 of the last 4 percentage points of payroll taxes at the SMIC level, it will be difficult to offset future increases in the SMIC with additional expense reductions. This raises the question of giving coherence to the policy of increasing the SMIC, the employment policy for low-wage earners and the policies (such as the *Prime d'activité*, the French version of the earned income tax credit), which make it possible to increase the purchasing power of low wage workers and alleviate poverty. We consider that an increase in the *Prime d'activité* is preferable from this point of view to an increase in the minimum wage.

Are payroll tax cuts a lever to improve competitiveness?

The objective of improving price competitiveness by reducing labour costs is theoretically grounded

Beyond the employment effect (see *above*), input cost decreases act as a positive supply shock that can be reflected in different ways depending on the situation and strategies of firms. This can be reflected in the level of wages, the margins of firms or their prices, particularly in exports. These different effects may be rival and must therefore be analysed together to identify the aggregate effects of payroll tax reductions.

A reduction in labour costs should *a priori* have the same impact as any other production cost reduction and should improve the competitiveness of firms by allowing them to lower their export prices and thus gain market shares. We see this very clearly on other costs. For example, recent work²⁰ using French data shows that a 10% decrease in an exporter's electricity prices (which represent only 3 to 4% on average of manufacturing exporter costs) allows to reduce its export prices by about 0.4-0.5%, which translates into an

¹⁹ Here we use the terms of Bozio *et al.*, (2018), *op. cit.*

²⁰ See Fontagné L., Ph. Martin and G. Orefice (2018): "The International Elasticity Puzzle is Worse than you Think", *Journal of International Economics*, forthcoming.

increase in export sales volumes from about 2 to 2.5% after one year. Other studies that use the same individual export data of French firms find a significant impact of differences in customs barriers (and therefore costs) between countries of destination.²¹ However, the elasticities that came out seem specific to the types of costs considered: a one-euro decrease in labour, energy or tariff costs does not affect export prices and therefore import volumes in the same way. As such, the labour market is a specific market, characterised by unemployment with structural and cyclical components, rigidities and dynamics of negotiations between employers and employees. It is therefore very important, in our opinion, to carry out an *ex post* evaluation of the various mechanisms for payroll tax relief without extrapolating effects from trade elasticity estimates obtained from variations in other dimensions of business costs (intermediate goods, exchange rates, customs tariffs, energy, etc.).

In addition, reductions in social security contributions can simply be passed on to an increase in the margins of eligible firms, that can be used to pay dividends to shareholders, to finance investment expenditure or, more cyclically, to restore a deteriorated financial situation. From this point of view, the effect of cost reductions also depends on the economic context in which they occur. Firms facing severe credit constraints are generally less likely to export²² or grow and *a fortiori* less likely to use a decrease in their production costs to reduce their export prices or increase employment.

Because policies to reduce social security contributions are concentrated on selected wage levels, their effects on exports depend on the wage bill of exporting firms, their outsourcing strategies and the dynamics of their sectors. In this respect, the economic literature has extensively documented the singularity of exporting firms, which are typically more productive and often more intensive in terms of skilled labour.²³

Where to target social security contribution relief to improve competitiveness?

One argument sometimes developed is that payroll tax reductions targeted on low wages (Juppé, 2015 *Pacte de responsabilité*) have not helped the competitiveness of the exporting manufacturing sector. These firms employ fewer

low-skilled, low-wage workers and their cost competitiveness would therefore not be improved by this type of tax cuts. This criticism is generally accompanied by a recommendation for reductions in social security contributions targeted on the wages of more skilled workers.²⁴ This was the main argument behind the extension in April 2016 of the *Pacte de responsabilité* beyond 1.6 SMICs and up to 3.5 SMICs, which was based on the Gallois Report (2012).²⁵

It is true that the most exporting firms (more than 30% of the production is exported) employ a small proportion of low-skilled workers directly: the share of low-wage earners (less than 1.6 SMICs) represents only 3% of the value of their production, compared to 10% for intermediate wages (between 1.6 and 3.5 SMICs).²⁶

However, the argument on the effects of tax exemptions on exports overlooks several essential points: first, France does not seem to suffer from a problem of competitiveness-cost of labour at the level of intermediate jobs (*cf. supra*); second, the risks of dilution of a decrease in payroll tax in wage increases are higher when moving to more skilled jobs; and finally, exporters in the manufacturing sector are highly-performant, with outsourced services that are intensive in low-skilled labour (such as cleaning, security, transport, etc.). They employ only a few low-skilled workers directly but purchase goods and services that use these workers. The direct cost of low-wage workers has little direct impact on exporting firms, but it plays an indirect role through the intermediate consumption of these firms. The work of INSEE, which has reconstructed the direct and indirect costs of exporting firms, shows that their costs depend on the costs of the rest of the economy. The competitiveness of the French export sector is not only the result of this sector but of the entire economy. The concepts of protected and unprotected areas are not very relevant from this point of view.

Thus, when intermediate consumption by exporters is taken into account, the share of low wages in production –less than 1.6 SMICs– rises from 3 to 9%. For the automotive sector, this share rises to 10%. Although the export sector still consumes less low-skilled labour than the rest of the economy (14%) (see Graph 3), the gap is much smaller. Payroll tax reductions on low wages can therefore have a positive, but mainly indirect, impact on exporters.

²¹ See Berthou A. and L. Fontagné (2016): “Variable Trade Costs, Composition Effects, and the Intensive Margin of Trade”, *The World Economy*, vol. 39, no 1, pp. 54-71 and Bas M., T. Mayer and M. Thoenig (2017): “From Micro to Macro: Demand, Supply, and Heterogeneity in the Trade Elasticity”, *Journal of International Economics*, vol. 108, pp. 1-19.

²² For the link between exports and credit constraints, see Manova K. (2013): “Credit Constraint, Heterogeneous Firms, and International Trade”, *Review of Economic Studies*, vol. 80, pp. 711-744; Chaney T. (2016): “Liquidity Constrained Exporters”, *Journal of Economic Dynamics and Control*, vol. 72, pp. 141-154.

²³ See, for the United States, Bernard A.B., J.B. Jensen, S.J. Redding and P.K. Schott (2007): “Firms in International Trade”, *Journal of Economic Perspectives*, vol. 21, no 3, pp. 105-130 and, for European firms, Mayer T. and G.L. Ottaviano (2007): “The Happy Few: The internationalisation of European Firms. New Facts Based on Firm-Level Evidence”, *Bruegel Blueprint Series*, vol. 3, November.

²⁴ See Koléda G. (2015): *Allègements du coût du travail : pour une voie favorable à la compétitivité française*, La Fabrique de l'Industrie, Preface by Louis Gallois and Denis Ranque, June.

²⁵ Gallois L. (2012): *Pacte pour la compétitivité de l'industrie française*, La Documentation française, November.

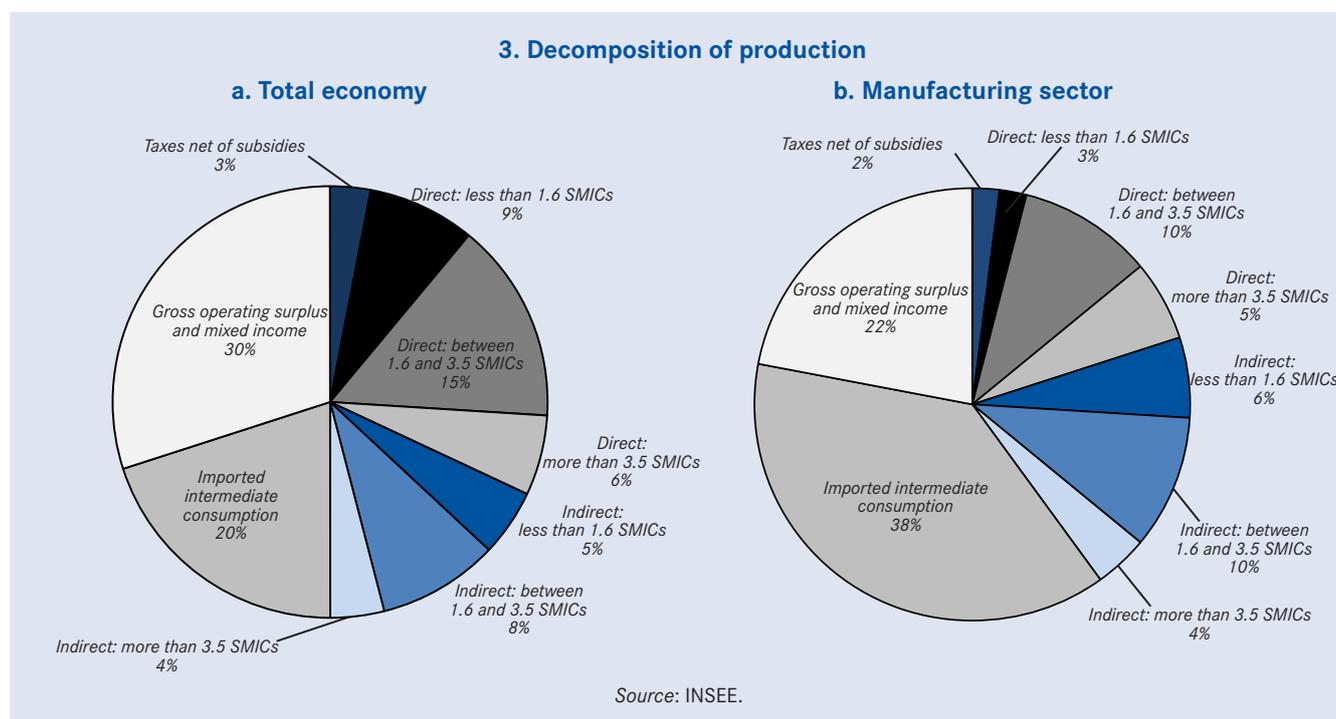
²⁶ These figures come from INSEE work carried out as part of this Note, see Koehl L. and O. Simon (2019): “Quels poids des bas salaires dans la production des branches ?”, *Focus du CAE*, no 028-2019, January.

It has already been noted that Germany stands out from other countries mainly because of lower labour costs in the service and construction sectors than in manufacturing, and that German competitiveness at the end of the production chain has been driven by strong wage moderation in the service sector. In this respect, the reductions in labour costs targeted on low wages can be interpreted as an adaptation to the French case (reductions in payroll taxes rather than mini-jobs) of a competitiveness strategy consisting in relieving exporters' domestic intermediate consumption. This is particularly noteworthy given that the share of domestic services included in French exports of manufactured goods is higher than elsewhere.²⁷ All in all, this confirms that a competitiveness strategy for the manufacturing sector can be achieved by reducing the costs of domestic services. From this point of view, the labour laws of autumn 2017, which make the labour market more flexible and decentralise wages negotiations at company level in order to better align wage developments and productivity, can also be interpreted as competitiveness policies.

Competitive functioning of domestic markets and import strategies for exporting firms

This dependence of the export sector's cost competitiveness on other sectors of the economy raises the question of

how a reduction of labour costs is transmitted along the production chain to exporters. According to a recent INSEE study,²⁸ the CICE has reduced upstream business costs but has only slightly reduced the prices of services purchased by businesses, with the exception of transport and administrative and business support services. An analysis at company level validates the hypothesis of a price decrease specific to certain sectors, with a moderation of prices being transmitted along the value chain. In particular, the administrative and support services sector (excluding leasing), an upstream sector in the production chain of many firms and widely exposed to the CICE, is quite revealing: a 1% reduction in the wage bill induced by the CICE is associated with a 0.4% price decrease.²⁹ In freight transport services and warehousing, INSEE also finds a significant CICE effect on prices but with a less strong downstream transmission effect. On the other hand, for several service sectors, such as legal, accounting and management activities or IT and information services activities, no price decrease correlated with the CICE is detected, whereas these sectors have exposure to the CICE that is only slightly lower than that of the transport sector. In most cases, the sectors for which a drop in prices thanks to the CICE can be detected also show job cuts and/or high *turnover*, with frequent business start-ups and destruction and/or a downward trend in employment.³⁰ These price adjustments may reflect strong competition within these



²⁷ It represents 32% of national exports of manufactured goods in 2011 according to the *World Input-Output Database* (WIOD) and *Trade In Value Added* (TIVA), the most important ratio among the countries mentioned in the two databases, see Berthaud F. (2017): "Le commerce de la France en valeur ajoutée", *Tésor-Eco*, no 207, October.

²⁸ Monin R. and M. Suarez Castillo (2018): "L'effet du CICE sur les prix: une double analyse sur données sectorielles et individuelles", *Document de Travail de l'INSEE*, Direction des Études et Synthèses Économiques, no G2018/03, May.

²⁹ In other words, it has an impact on prices, what economists call "*pass-through*" of around 70%, given the weight of the wage bill in production costs.

³⁰ The elasticity found in the sector of administrative services and business support activities is particularly sensitive to the panel construction over the 2009-2014 period. When the presence condition over the period is relaxed, the elasticity is even higher, suggesting that activities with high *turnover* (such as building services) pass on the cost of intermediate consumption to prices.

sectors. The link between the degree of competition and the transmission of price decreases along the value chain as a result of a reduction of labour costs is, as such, a hypothesis that should be explored in future research.³¹

Finally, it should be recalled that labour costs, whether direct or indirect *via* domestic intermediate consumption, represent only 38% of the value of production of firms in the exporting sectors. This is largely due to the fact that exporting firms –which is not specific to France– import a large part of their intermediate consumption: it constitutes 38% of the value of their production against only 20% for the economy in general. Thus, the competitiveness of French exporters depends very strongly on their inclusion in global production chains and their ability to import these intermediate inputs at low cost. In this respect, the comparison with Germany is again enlightening: while France has not significantly changed the geographical origin of its imported intermediate goods, Germany has intensified its imports and partially redirected its input supplies from the EU15 to the countries of Central and Eastern Europe³² and also to Asia. This reveals a growing industrial polarisation within the European Union, with territorial specialisation unfavourable to France, which supplies itself in countries where production costs are higher than in Central and Eastern Europe.

The CICE did not have a significant impact on exports

The evaluation of the impact of labour cost reduction measures on the export performance of French firms has only very recently begun, motivated by the fact that improving competitiveness is officially included in the objectives of the CICE. Two recent studies have specifically assessed the effects of CICE on exports (one conducted by the OFCE, the other by LIEPP).³³ Both use the variability of the “treatment intensity” by the CICE between firms. The OFCE study focuses on the expected *ex ante* effects, assuming that the relevant elasticity is the one found elsewhere on the response of exports to the cost of production. The results show an expected positive impact. Because the labour market is different, we consider it preferable to evaluate the *ex post* effects. This is the case of the LIEPP study, which exploits the difference in export performance on the various world markets according to the degree of exposure to the change in social contributions

induced by the CICE. The results are much less positive and conclude that there is no statistically significant effect.³⁴

There are several possible explanations for this disappointing result. The first is that firms have taken time to react to this measure since it is a credit for the tax paid the following year, and that, moreover, the funds could be used to finance investments that pay off in later periods. We therefore asked the IPP to extend the LIEPP *ex post* study to the most recent years (2012 to 2017). The results incorporating longer-term effects do not give a more positive conclusion. The effects appear to be unstable and volatile and very rarely differ from zero.

The second possible explanation is related to the fact that the CICE took the form of a profit tax credit rather than a simple reduction in payroll contributions, which would have been more readable and easily interpreted by firms as a cost reduction. For this reason, we support the decision to transform the CICE into a simple payroll tax reduction. To overcome the specific problem related to the CICE modality, it is possible to conduct the analysis on other measures that have been “simple” contribution reductions. In recent years, these have been the *Pacte de responsabilité* and earlier the so-called Juppé II reliefs.

What are the impacts of direct reductions in social security contributions on exports?

The identification of an impact in terms of competitiveness of payroll tax reductions is more difficult than for other types of costs such as the cost of electricity already mentioned. Indeed, in the case of labour costs, the impact could have been direct as well as indirect (see *above*). Thus, the performance of exporting firms that have systematically outsourced low-skilled services (preventing them to benefit directly from the cost reductions) could be identical to those that have benefited directly, but it could not be concluded that the cost reductions have not had an impact on the competitiveness of firms. By focusing on exporting firms that have outsourced little (with intermediate consumption of services below the median), we find that the 1.8 points reduction in social contributions on low wages, under the 2015 *Pacte de responsabilité*, had the direct effect of increasing exports by about 1.3%. This may seem low, but it

³¹ More generally, anti-competitive practices have the effect of reducing exporters’ competitiveness. For example, an agreement in the field of chemical distribution was sanctioned in France in 2013. Artificially high costs of these products used by the agri-food or automotive industries reduce the competitiveness of these exporting sectors, see, for example, Combe E. and C. Monnier (2012): “Les cartels en Europe, une analyse empirique”, *Revue Française d’Économie*, vol. 27, no. 2, pp. 187-226.

³² Fontagné L. and F. Toubal (2011): “Commerce de biens intermédiaires et compétitivité”, *Rapport d’Étude du CEPII*, no 3, December; Fontagné L. and F. Toubal (2012): “Les importations de biens intermédiaires, facteur de compétitivité ?”, *Le chiffre du commerce extérieur, Études et Éclairages*, no 33.

³³ Guillou S., R. Sampognaro and T. Treibich (2017): “L’impact attendu du CICE sur les exportations : une analyse à partir de données d’entreprises”, *Revue de l’OFCE*, vol. 154, no 5, pp. 131-177; Malgouyres C. and T. Mayer (2018): “Exports and Labor Costs: Evidence from a French Policy”, *Review of World Economics*, vol. 154, no. 3, pp. 429-454.

³⁴ Levratto N. and A. Garsaa (2018): “Exportations et exonérations, les deux vont-elles de pair ? Analyse empirique sur données individuelles d’entreprises françaises”, *EconomiX Working Paper*, no 2018-46, find a negative correlation between payroll tax reductions and exports. The most plausible interpretation of this result (because the study does not control the productivity and permanent characteristics of firms unlike the IPP) is that exporting firms are more productive and pay higher wages (which has been demonstrated in many papers) and are therefore by construction less affected by cost reductions.

2. Results of the IPP report commissioned by the CAE

Based on several databases such as annual firms declarations of social data (*Déclarations annuelles des données sociales*, DADS), economic and financial indicators (*Fichier approché des résultats d'ESANE, Élaboration des statistiques annuelles d'entreprises*, FARE), international trade (customs database) and corporate tax receivables (*Mouvements sur créances*, MVC, database), the IPP Report analyses the effects of three reductions in social contributions: Juppé II (1995-1997), CICE (2014) and the *Pacte de responsabilité* (2015 and 2016). Particular attention is paid to the effects on exports of French firms.

The methodology used to study these effects exploits the heterogeneity of direct exposures to the different reforms. This direct exposure depends on the amount of payroll eligible for reductions in social security contributions.

	Juppé II	CICE	<i>Pacte de responsabilité</i> (PR) 2015 and 2016
Margins	Not studied	Not studied	For 2015 PR, no visible effects in the manufacturing sector alone. In the economy as a whole, the assumption that the decline in labour costs has been fully reflected in margins cannot be rejected. Data not available for 2016 PR.
Jobs	Very positive, of a similar order of magnitude to the results found by Crépon and Desplatz	Not studied	Positive but less robust effects for 2015 PR. Data not available for 2016 PR.
Exports	No visible effects	No visible effects	For 2015 PR, no aggregated effects but positive effects for firms with little outsourcing. No visible effects for 2016 PR.
Productivity	Significant decrease in productivity calculated as value added per employee		Visible decrease for the majority of business groups.

Source: Malgouyres C. (2019): "Coût du travail et exportations : analyses sur données d'entreprises", *Rapport IPP*, no 20, January.

is a quantitatively high effect compared to the low share of labour cost for these firms.

These results suggest that some exporting firms have benefited directly from lower payroll taxes on low wages to increase their exports. The others have been able to benefit indirectly from it, but at this stage we cannot prove an export effect. Another result of the statistical analysis is that the 2015 *Pacte de responsabilité* has enabled firms to restore their margins (gross operating surplus to turnover ratio). This is one of the most robust results of recent policies of social contributions reductions. In the context of the 2015 *Pacte de responsabilité*, we cannot reject the hypothesis that 100% of the cost reduction induced by the lower social contributions was used to increase margins by exporting firms. One possibility is that by allowing margins to rise, these policies would allow investments to improve competitiveness excluding costs in the longer term.

In the case of the Juppé payroll tax reductions, the empirical analysis carried out on the most affected firms, which we have seen to show a strong and consistent impact on employment, does not detect any impact on the various dimensions of export performance (value exported, number of markets, number of products exported, etc.). An interesting result is that in the case of manufacturing, employment is growing much faster than value added. As a result, the productivity of the firms most affected by the cost reductions appears to be declining due to the policy. One possible criticism of the (successive) policies of lowering the cost of low-skilled labour, but that has never been empirically tested, is that they may have slowed

down investment on quality and the upscaling of the French manufacturing sector. However, Germany has –with other methods than payroll tax reductions– significantly reduced the cost of low-skilled labour, which has in no way led it to reduce its non-price competitiveness.

What would be the effects of more pronounced targeting on the wage levels most represented in exporting firms? To answer this question, we study the effects of extending the *Pacte de responsabilité* to higher wages (between 1.6 and 3.5 SMICs) starting in April 2016. These wages represent about 10% of the value of exporters' production (compared to 3% for wages below 1.6 SMICs). We cannot detect any impact on competitiveness of these targeted cost reductions at these higher wage levels. One possible explanation is that this relief would also have been used to increase the wages of skilled workers with low unemployment rates.

Thus, the existing evaluations as well as the evaluations carried out for this *Note* do not show a positive effect on exports of the reductions of the social security contributions on wages above 1.6 SMICs, whereas this policy (2016 *Pacte de responsabilité* and CICE to a large extent) has been motivated mainly by an objective of competitiveness. On employment, the work on the CICE has shown a very modest impact. These results need to be confirmed by future evaluations conducted by France stratégie: by studying more closely the heterogeneity of firms, the impact on employment and wages and the influence of the economic situation. With regard to the cost to public finances (more than €26 billion for the CICE and the 2016 *Pacte de responsabilité*), decisions will have to be taken on the basis of

a cost-benefit analysis. The 1.8 points exemptions between 1.6 and 3.5 SMICs will cost €4 billion in 2019. The benefit has not been demonstrated and if the argument of stability should lead to the sustainability of the reductions in social contributions on low wages, which have proved their effectiveness, it should not prevent negative evaluations from being acted upon.

Recommendation 3. Abandon in the 2020 budget the payroll tax reductions above 2.5 SMICs or even 1.6 SMICs, if upcoming evaluations of France Stratégie confirm their disappointing results.

There are potentially other strategies than cost reductions to help competitiveness. Several issues, some of which are mentioned in this *Note*, require in-depth analysis: the impact of taxes on production, the influence of competition policy on the costs of exporters' inputs, wages and prices setting in the euro zone, which affects France's macroeconomic competitiveness vis-à-vis its European partners. ●



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