

Effect of the Hiring Premium for SMEs on employment: measurement via business tendency surveys

Business tendency surveys provide a way of assessing whether the “hiring premium for SMEs” had an effect in boosting the employment intensity of growth, as entrepreneurs give their opinions in the surveys on their activity and on changes in their number of employees. For a given level of activity, the hiring premium does seem, taken on its own, to have given SMEs an incentive to recruit more than other enterprises, but the effect has remained somewhat limited.

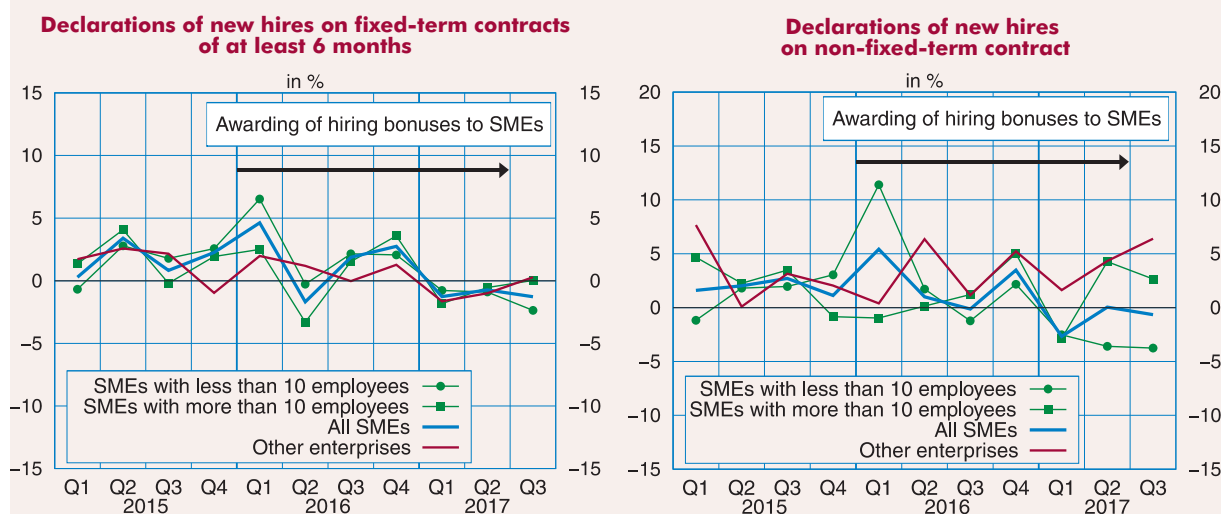
The Hiring Premium: a specific scheme from January 2016 to June 2017

Between 18 January 2016 and 30 June 2017, every enterprise or association with a headcount of less than 250 employees that hired a new employee on an open-ended contract or on a fixed-term contract of over 6 months with gross monthly pay of up to €1,900, received a quarterly premium of €500 for the first two years of the contract. The premium thus came to a maximum of €4,000 in total. In the space of 18 months, 1.6 million hiring premiums were granted to small and medium enterprises (SMEs). It should be noted that the range of enterprises benefiting from the hiring premium was broader than the range of SMEs usually described in INSEE publications (see *Definitions*). The measure was part of the Emergency Plan for Employment announced in January 2016. It was initially scheduled to stop at the end of December 2016, but was extended for a further six months by a decree published in November 2016 and therefore ended in June 2017.

Declarations of new hires on fixed-term contracts of at least 6 months progressed significantly more for SMEs than for other enterprises

Implementation of the hiring premium would appear to have had an impact on declarations of new hires on fixed-term contracts of at least 6 months, as declarations made by SMEs increased more than those by other enterprises (*Graph 1*). In 2016 and H1 2017, the average number of new hire declarations per quarter increased by 8% for SMEs and by only 4% for other enterprises, in relation to 2015. This difference is largely explained by the behaviour of smaller enterprises (fewer than 10 employees on a full-time equivalent basis), in which recruitments were particularly dynamic, with the exception of the relative slowdown in Q2 2016 in reaction to the sharp acceleration in Q1. New hires on open-ended contracts did not show a similar trend, with declarations of new hires by SMEs (+10% on average over the period) even being less dynamic than those of other enterprises (+14%). However, for both types of employment contract, declarations of new hires by SMEs slowed down in Q3 2017, which would seem to indicate that the end of the measure did indeed have an impact on recruitments in stable employment.

1 – Quarterly change in number of new hire declarations in the market sectors by enterprise size



How to read it: in Q1 2016, declarations of new hires on fixed-term contracts of at least 6 months by market-sector SMEs with at least 10 employees on a full-time-equivalent basis, increased by 7%.

Sources: AcoSS, DPAE, INSEE, calculations of enterprises categories and seasonal adjustment

French developments

SMEs contributed significantly to the improvement in the employment climate in 2016 and then its fall in summer 2017

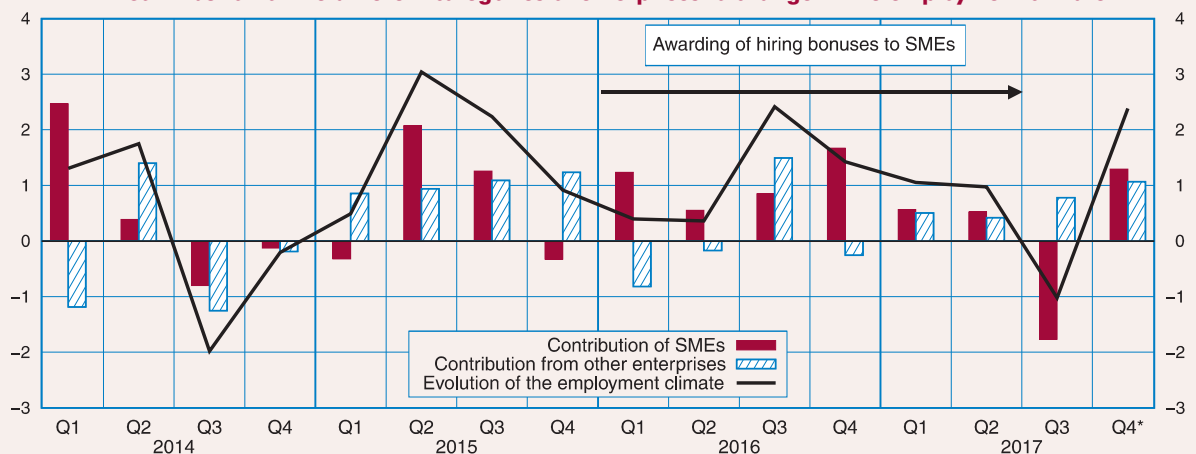
The effect of the hiring premium on employment cannot be deduced directly from the trend in new hire declarations, as companies may have substituted recruitments on fixed-term contracts of more than 6 months for contracts of less than 6 months in order to benefit from the measure without necessarily increasing their headcount. However, the responses of SMEs to the business tendency surveys, compared to those of other enterprises, do testify to a positive effect of the measure on trends in the employment climate in 2016 (Graph 2). The “employment climate” combines the balances of opinion on past and future employment from the different business tendency surveys carried out monthly by INSEE (report in *Conjoncture en France* in March 2017).

Over the two years prior to the introduction of the measure, the responses of each category of enterprise explain the variation in the employment climate proportionally to their weight: in 2014 and 2015, SMEs contributed +0.6 points to the quarterly average of the employment climate, against +0.4 points for other companies. This result is roughly proportional to the share of SMEs in employment within the scope of the surveys (a little over 60% in 2015). In 2016, the contribution of SMEs was significantly greater (+1.1 points on average) than that of other enterprises (+0.1 points). In H1 2017, the extension of the measure does not seem to have driven any particular trend in the employment reported by SMEs. The end of the measure, however, was accompanied by a strong negative contribution of SMEs to the employment climate over Q3 2017. The rebound observed in the surveys in October and November 2017 also seems to have been due mainly to SMEs: the backlash triggered by the end of the hiring premium would appear to have affected their responses only over the summer, without any effect thereafter.

The business tendency surveys serve to go further by measuring the effect on the employment intensity of growth

However, during the period of existence of the measure, larger enterprises may have been affected by a different economic outlook to that of SMEs. SMEs may also have benefited more than other enterprises from the other measures to reduce labour costs. In particular, the Tax Credit for Encouraging Competitiveness and Jobs (CICE, from 2013 onwards) and the Responsibility and Solidarity Pact (PRS, from 2014 onwards) aim to reduce the cost of labour for the lowest pay levels. These mechanisms may have favoured employment in SMEs a little more than that in larger enterprises, as shown by the business tendency surveys, given that within the scope of the surveys, the Tax Credit for Encouraging Competitiveness and Jobs covers about 60% of the payroll of SMEs, against 50% for the other enterprises.

2 - Contribution of the different categories of enterprises to change in the employment climate



*The result for Q4 2017 was obtained on the basis only of the business tendency surveys for October and November 2017.

How to read it: the quarterly average of the employment climate indicator (black line) increased between Q1 2014 and Q4 2013 (+1.4 points). This rise was due to the improvement in the employment outlook for SMEs (contribution of +2.5 points, dark red bar), partly attenuated by the deterioration in the employment climate for other enterprises (contribution of -1.1 points).

Sources: INSEE, DADS and business tendency surveys in industry, services, retail trade and building industry

A model to assess the effect of the measure on response behaviour

To measure the effect of the hiring premium on the employment intensity of growth, a comparison must be conducted between those enterprises that benefited from the premium and those that did not, while comparing enterprises with equivalent levels of activity and which use the other labour cost reduction mechanisms in the same way. We therefore analysed the responses of each company i to the question on the change in their number of employees over the past quarter T ($past_employment_{i,T}$), taking account of the change in their activity over the past quarters and of the share of their payroll affected by labour cost reduction measures. The following fixed-effect linear model (μ_i) was estimated (see *Method*):

$$\begin{aligned}
 past_employment_{i,T} = & \sum_{k=0}^3 (\alpha_k \cdot past_activity_{i,T-k} + \beta_k \cdot order_{i,T-k}) \\
 & + \gamma_T \cdot share_wage_reduction_CICE_i \\
 & + \kappa_T \cdot share_wage_reduction_PRS_i \\
 & + \delta_T^{SME} \cdot 1_{SME}(i) + \delta_T^{Other} \cdot 1_{Other}(i) \\
 & + \delta_T^{Sub-sector} \cdot 1_{Sub-sector}(i) + \mu_i + \varepsilon_{i,T}
 \end{aligned} \tag{1}$$

In order to take account of the effect of the productivity cycle on enterprises' responses concerning their workforce, we took into consideration the responses of enterprises on their activity over the last four quarters. Two types of activity-linked variables were used:

- the change in activity over the past three months (the variable $past_activity_{i,T-k}$): these are the qualitative responses of entrepreneurs on the past trend in production for industry, in turnover for services, and in business or sales for the retail trade;

- the state of orders or demand (the variable $order_{i,T-k}$): these are the qualitative responses to the questions about the overall level of orderbooks in industry, about the likely trend in demand over the coming three months in services, and about the likely trend in the orders the enterprise intends to place over the coming three months in the retail trade.

There was a control for the effects of other labour cost reduction measures by taking account of the share¹ of the payroll of each company corresponding to wages of less than 2.5x the minimum wage for the Tax Credit for Encouraging Competitiveness and Jobs ($share_wage_reduction_CICE_i$) and of less than 1.6x the minimum wage for the Responsibility and Solidarity Pact ($share_wage_reduction_PRS_i$). A different model was estimated for each sector. As industry and services are highly heterogeneous sectors, controls were added to the models for each sub-sector ($\delta_T^{Sub-sector}$) to take account of any specific short-term employment outlooks.

The estimations can identify the introduction of the hiring premium mechanism

Over the 2012-2015 period, the SME-specific change in employment (δ_T^{SME}) and that specific to larger enterprises with less than 500 employees (δ_T^{Other}) followed relatively similar trajectories (*Graph 3*): for a given level of activity in the two categories of enterprise, employment fell in 2012 before increasing sharply in 2014 and 2015. Over the period when the hiring premium was being awarded, SMEs increased their workforces more on average than larger companies, for a given level of activity. The measure does therefore seem to have boosted the employment intensity of growth in the activity of SMEs. In Q3 2017, a backlash was observed when the mechanism came to an end.

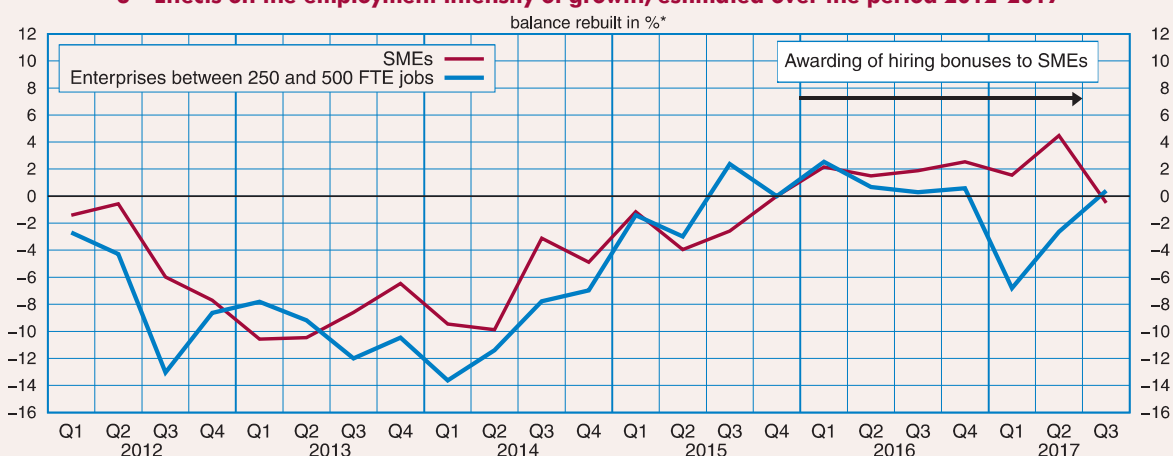
The effect of the measure is significant in the responses of enterprises in industry and the retail trade

The specific effect of the hiring premium can be estimated by comparing the SME-specific trend in employment with that for larger enterprises with a headcount of less than 500. The change was calculated in relation to Q4 2015, the quarter preceding entry into force of the measure. For quarter T , the effect of the mechanism corresponds to the following twofold difference:

$$Effect_T = \delta_T^{SME} - \delta_{2015Q4}^{SME} - (\delta_T^{Other} - \delta_{2015Q4}^{Other}) \tag{2}$$

1. These shares were estimated on average over the year 2014 as a whole, based on the DADS.

3 – Effects on the employment intensity of growth, estimated over the period 2012-2017



* see *Method*

How to read it: the "SME" curve corresponds to the estimated coefficients of the model (1) δ_T^{SME} while the "Enterprises between 250 and 500 FTE employees" curve corresponds to the coefficients δ_T^{Other} . The two series were calculated so as to be zero for the quarter prior to the introduction of the hiring premium, which is to say Q4 2015. This convention enables us to interpret the gap between the two curves as the effect of implementation of the measure on employment in SMEs. It has an influence on the amplitude of the result but not on its significance.

Scope: enterprises with less than 500 employees on an FTE basis and responding to the business tendency surveys in the industry, market-sector services excluding temporary work, and retail trade sectors.

Sources: INSEE, DADS and business tendency surveys in industry, services and retail trade

Over the period during which the hiring premium was awarded, SMEs in industry and trade reported an increase in their workforce more often on average than larger companies, for a given level of activity (*Table*). The measure does seem to have boosted the employment intensity of growth in the activity of SMEs in these sectors and to have driven an average increase of 2.1 points in the balance of opinion on changes in the number of employees over the past quarter in industry, and an increase of 3.2 points in trade. In market-sector services excluding temporary employment, the effect was positive in H1 2017, but was not statistically significant on average over the period. When the results were aggregated and weighted for the level of employment in each sector, we obtained a significant average effect on the balance of opinion of +1.6 points.

Estimation of the effect of the hiring premium (equation 2) on the balance of opinion on past number of employees

in points of balance

	Services except temporary employment	Industry	Trade	All 3 sectors
2016 Q1	0.0	1.0	2.2	0.7
2016 Q2	-0.4	2.5**	2.2	0.8
2016 Q3	-0.2	1.7*	3.7*	1.1
2016 Q4	0.5	2.0	1.0	1.0
2017 Q1	2.7*	2.8**	7.0***	3.7**
2017 Q2	1.9	2.4**	3.3*	2.3*
Mean on the period active device	0.8	2.1**	3.2*	1.6**
2017 Q3 (completed device)	0.0	0.1	3.8*	0.9

Note : *, ** and *** indicate that the effect on employment was significantly greater than 0 for a test with an error level of 10%, 5% and 1% respectively. For industry, the reference period was H2 2015, with this choice being justified by the high volatility of the coefficients obtained at the end of 2015 for other enterprises in this sector.

How to read the table: in Q2 2016, the award of hiring premiums to SMEs would appear to have increased the balance of opinion on past number of employees in the sector as a whole by 2.5 points. This effect is significantly greater than 0 for a test with an error level of 5%.

The effect measured using the business tendency surveys would appear to correspond to an increase of about 10,000 jobs in 6 quarters

The effect on the “past change in employment” balance can be translated into a number of jobs using calibration models that explain the change in employment in each sector on the basis of the past change balance obtained at the end of the quarter. On average over the period of existence of the measure, the rise in the past employment balance attributable to the hiring premium would appear to correspond to the creation of about 10,000 additional jobs from the beginning of 2016 through to mid-2017 in industry, trade and market-sector services excluding temporary work. This does therefore show that the measure had a positive but limited effect. This result remains quite close to that of Beaumont et al. who did not find a significant effect when comparing enterprises on either side of the 250-employee threshold. According to the focus in the Employment sheet in *Conjoncture in France* in June 2016, based on the habitual elasticity of employment to its cost, the estimated effect was much greater, at around 50,000 jobs during the 6 quarters when the premium existed.

However, converting the balances directly into numbers of jobs is a very approximate process and the results should be interpreted with caution. More particularly, the choice of the group of enterprises serving as the point of comparison (those with 250 to 500 employees, here) is open to debate: in the building sector, the assessment method we have just described produces results that are not very realistic. Even before the introduction of the hiring premium, SMEs and enterprises with 250 to 500 employees were showing very different trends in employment (for a fixed level of activity). The choice of the reference period was also made by convention: if H2 2015 had been chosen for all sectors, the estimated effect would have been a little greater, at around 15,000 jobs. Conversely, if the whole of 2015 had been taken as the reference period, the result would have been to cut the estimation of the effect on employment intensity to around 7,000 jobs.

Finally, business tendency surveys and the method used here are not particularly well suited to monitoring the smallest (or youngest) companies, as they are surveyed less frequently (as is the case of industrial enterprises with less than 20 employees) and respond less regularly to surveys. They are therefore taken into account less often in the estimation of the model (1) which requires the same enterprise to be observed in four consecutive quarters. However, analysis of the new hire declarations (*Graph 1*) indicates that the smallest companies would appear to have changed their recruitment policies more particularly with the introduction of the hiring premium.

All in all at this stage, the estimation of the effect on the job intensity of growth made in June 2016 has been kept for the forecast in this *Conjoncture in France*, which is to say +10,000 per quarter from Q2 2016 to Q2 2017 and then -10,000 per quarter from mid-2017 to mid-2018. ■

Bibliography

Beaumont P., Luciani A. and Slimani Houti I. (2016), “Hiring bonus in small and medium-sized enterprises: initial evaluation based on hiring declarations”, *INSEE Analyse* n° 29, December.

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Definitions

Small and medium enterprises (SMEs) and other enterprises: in this study, the “SME” category includes all those companies that were eligible for the hiring premium. These were legal units with less than 250 employees on an FTE basis in 2015. Their salaried workforce was estimated on the basis of their Annual Declarations of Social Data (DADS). The notion of an enterprise used here is not that in Article 51 of the Law on the Modernisation of the Economy, which is to say the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. This is because the legal units eligible to benefit from the measure were not always independent of a larger group. To estimate the model (1) and the effect (2), the “other enterprises” category included legal units that were not eligible for the hiring premium, employing between 250 and less than 500 employees on an FTE basis. As the hiring premium did not apply to temporary employment, all temporary work agencies (class 78.20 in the NAF French Classification of Activities, rev. 2) were classified in the “other enterprises” category, whatever their size.

Method

The model (1) was estimated by setting the value of the qualitative variables (past_employment, for example) to 100 when the enterprise responded “up”, to 0 when it responded “unchanged” and to -100 when it responded “down”. The balances were obtained by calculating a weighted average of these variables. The estimate was calculated using the responses from companies with less than 500 salaried employees on an FTE basis.