

# An assessment of the effectiveness of rebates for keeping the over-60s in employment



Mario Izquierdo Peinado and Sergio Puente Díaz

16 November 2017

Traditionally, employment policies in Spain have rested to a greater extent than in other countries on the application of rebates to the Social Security contributions of specific groups. The international empirical evidence on the effectiveness of this type of programme tends to show that, in general, these programmes involve a high budgetary cost, with limited although positive effects on the groups concerned, without affecting the aggregate level of employment. With the aim of providing additional evidence on this matter, this article summarises the results of an exercise assessing a specific Social Security contribution rebates programme in force from 2006 to 2012 for the group of workers over 60. Specifically, using data from the Spanish MCVL (Social Security administrative labour records), the effect that the elimination of this rebates programme had on the probability of these workers losing their job is estimated. The results show that the elimination of the incentives gave rise to a positive and significant although limited impact on the probability of this group losing their job, which was concentrated among the low-skilled, with relatively few years of service in the firm and with lower severance costs. Overall, the evidence would indicate that the programme produced scant benefits in terms of a higher rate of employment retention for the group of workers concerned. These findings are confined to this specific programme and, therefore, they are not extensible to the range of employment rebates for different groups that have been in force in the past in Spain or are so are present, although they highlight the need for a detailed assessment of active employment policies providing for an analysis of their effectiveness.

# AN ASSESSMENT OF THE EFFECTIVENESS OF REBATES FOR KEEPING THE OVER-60s IN EMPLOYMENT

The authors of this article are Mario Izquierdo Peinado and Sergio Puente Díaz of the Directorate General Economics, Statistics and Research.

## Introduction

In Spain, employment policies have been geared more intensively than in other countries towards incentives to promote the permanent employment of specific groups, such as the young, the long-term unemployed and the elderly, normally through rebates on employers' Social Security contributions. For example, Spain was among the OECD countries with the highest spending as a percentage of GDP on employment incentives, posting 0.3% on average from 2004 to 2011<sup>1</sup>, a figure only exceeded in the same period by Belgium, Sweden, Denmark and Luxembourg. In terms of the percentage of employment affected by this type of rebate, Spain ranked first throughout this period, with 8.6% of employment, far above the average level (1.7%) observed among the OECD countries with available information.

However, the empirical evidence available tends to throw up rather unfavourable results regarding the effectiveness of this type of incentives programme. In particular, Barceló and Villanueva (2016) find some positive effects of the regional subsidies for permanent employment, increasing the probability that the groups subject to rebates will attain such employment. However, the costs associated with these programmes are high and most of the empirical evidence tends to show that any increase in probability appears, in any event, to arise largely at the expense of other groups, without these incentives exerting lasting effects on the aggregate rate of employment or on permanent employment [see, *inter alia*, Kugler *et al.* (2003), Toharia *et al.* (2008) and García Pérez and Rebollo (2009)]<sup>2</sup>.

With the aim of providing additional evidence on the effectiveness of this type of incentive, this article summarises the results of a recently published paper<sup>3</sup> which analyses the effectiveness of a specific programme aimed at maintaining jobs for the over-60s that was in force from 2006 until July 2012. A detailed description follows of the characteristics of the programme, the strategy used to analyse its impact and the empirical findings on its effects. The third section includes an initial approximation to the cost/benefit analysis for the public sector of this programme.

## Estimating the impact of the programme of incentives for keeping the over-60s in employment

This programme was introduced in 2006 and was aimed at keeping elderly workers – specifically those aged over 60, with a permanent contract and with at least five years' service within the firm – in employment. In this connection, 50% rebates were offered on employers' Social Security contributions for workers aged 60, with a 10 pp increase in the rebate per year up to a ceiling of 100% for those aged 64. The essential justification behind these incentives is the declining path employee productivity usually follows after a certain age [Skirbekk (2004)], which gives rise to a gap between this productivity and the attendant wage, which adversely affects the probability of keeping this group in employment [Ilmakunnas y Maliranta (2005)].

To assess the effectiveness of these incentives over the period they were in force, this article resorts to analysing firms' reaction after the exogenous increase in labour costs

1 The OECD average stood at 0.13% in this same period.

2 More recently, Gamberoni *et al.* (2016) have also found similar results on analysing the impact of tax incentives associated with the "entrepreneurial contract" approved in the 2012 labour market reform.

3 See Font *et al.* (2017).

arising from the elimination of the incentives in July 2012.<sup>4</sup> This elimination prompted an unexpected increase in the labour costs of firms that employed the workers affected by this programme of 10-22.2%, depending on the age of the worker. In analysing the impact it does not suffice to observe the changes in the employment of the related group of workers after July 2012, since other factors, such as the economic situation, might explain such changes. Accordingly, a peer or control group of workers must be found that has not undergone any change regarding rebates, but which is comparable to the group affected in terms of the expected impact of the rest of the factors that affect the probability of remaining in employment.

In this case use is made of a control group taken from another employment retention programme that was in force until late 2012 for workers aged 59 with a permanent contract and at least four years' service.<sup>5</sup> This programme was not eliminated between July and December; rather, its discontinuation was postponed until early 2013, owing to an administrative issue.<sup>6</sup> As a result, a five-month period is available to compare the paths of both groups of workers. In terms of the characteristics of the groups concerned, they are both very similar as regards variables such as tenure, the incidence of part-time employment and average wages.<sup>7</sup>

Accordingly, the impact of the elimination of the employment retention subsidies is analysed by observing the relative changes in the probability of job loss after July 2012 among the group of workers that ceased to have this rebate, setting them against the group of workers that retained the rebate until the end of the year. In principle, the two groups are very similar and, therefore, they would be similarly affected by the other economic factors that may influence the probability of job loss.

For this analysis, data from the MCVL (Social Security administrative labour records) are used. These provide all the labour market transitions of a random, non-stratified sample of 4% of the individuals with some relationship to the Social Security system. In particular, individuals who were working in January 2012 are considered, and these are tracked throughout the year until December. Chart 1 shows the difference in the proportion of these workers who lost their job up to the related month, depending on whether they belong to the group of workers aged 60-64 or to the control group (aged 59).

On the basis of this information it is clearly seen how, on a positive slope, which indicates that the over-60s workers have a uniformly greater probability of losing their job during the year, a change arises in this difference as from July 2012. Specifically, in that month, coinciding with the elimination of the incentives, the probability of job loss increased for the group of workers concerned. Moreover, when this same analysis is repeated for previous years this break is observed not to have taken place, thereby ruling out the possibility that other, conjunctural-like factors might explain this difference as from July each year.

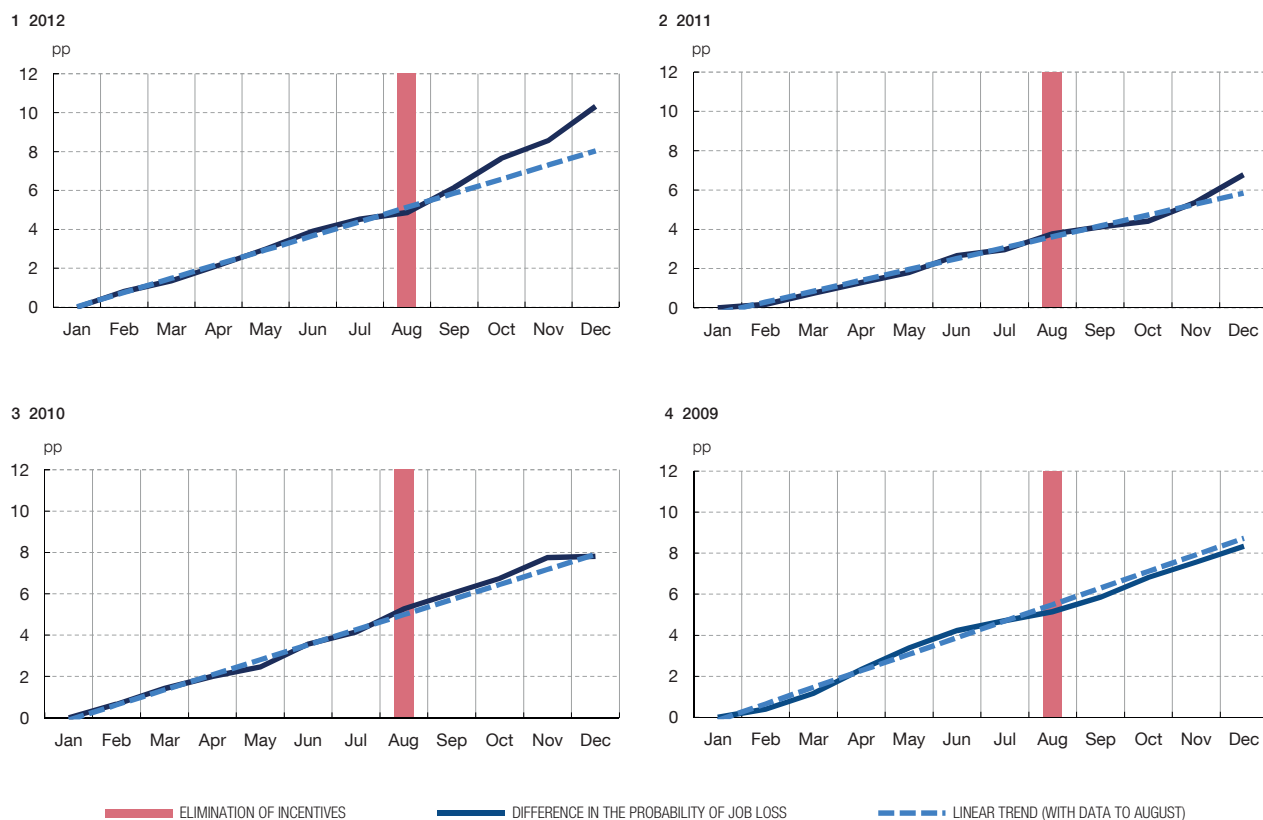
---

4 RDL 20/2012 dated 13 July 2012.

5 The firms received a 40% Social Security contribution rebate under this programme.

6 In particular, the subsidy for the over-60s was legally from a previous Royal Decree-Law, which remained in force until being revoked on 13 July 2012. Conversely, the rebate for the workers aged 59 was renewed year by year under the State Budget. In 2013 there was no such renewal, meaning the rebate survived until end-2012.

7 Font *et al.* (2017) show how another potential control group, that of workers aged 60 or over with a permanent contract but with fewer than five years' service in the firm, is a less suitable control group for the analysis, as it presents substantial differences from the group subject to the rebate in terms of variables such as tenure in the firm, the incidence of part-time employment, male/female distribution and average wages.



SOURCE: Banco de España.

To quantify the scale of the effect of the disappearance of the rebates in summer 2012 on the probability of job retention, a probit model is estimated in which the variable to be explained is the probability of the worker losing his/her job between August and December 2012. The usual control variables that may affect this probability are included, such as worker age, sex, years of tenure and level of educational attainment, and our variable of interest that identifies the workers whose subsidy was eliminated in July 2012. Moreover, this variable interacts with worker age and years of service to control for possible effects other than the elimination of the subsidy for these groups of workers.

The results of this estimation are in line with expectations as to the effect of the control variables on the probability of job loss, i.e. this probability increases with age and diminishes with level of educational attainment and level of experience. As regards the impact of our variable of interest, the probability of workers losing their job between August and December 2012 is estimated to have increased from 6.7% to 8.5% once the subsidies were eliminated (see Table 1). Accordingly, the end of employment maintenance subsidies prompted a small but significant increase (1.8 pp) in the probability of workers aged over 60 losing their job. If we differentiate this impact for different groups of workers, the impact of the elimination of the rebates can be seen to increase with age<sup>8</sup> and it is particularly high for workers aged 64, which was the group that experienced the

<sup>8</sup> That said, the lower number of observations when we distinguish between specific ages means that some estimates are not significant.

	Estimated probability of job loss		
	With rebate	Without rebate	Difference
Aggregate	6.7	8.5	1.8 **
By age			
60	5.5	7.0	1.5 *
61	5.6	6.7	1.1
62	5.7	7.8	2.1 *
63	9.3	11.0	1.6
64	10.5	15.1	4.6 **
By years of tenure			
5-9 years	7.0	9.7	2.7 ***
10-17 years	6.5	8.4	1.9 **
>18 years	6.5	7.3	0.8
By level of educational attainment			
Low and medium	6.8	8.8	2.0 **
High	5.4	6.0	0.6

SOURCE: Banco de España.

NOTE: \*, \*\*, \*\*\*, significant at 10%, 5% and 1%, respectively.

biggest increase in the probability of losing their job following the elimination of the incentives.<sup>9</sup> In terms of level of educational attainment, the probability of job loss for a worker with a low-skilled job increased from 6.8% to 8.8%, while for high-skilled jobs no significant increase was observed.<sup>10</sup> Finally, the most interesting results arise on analysing different levels of years of service in the firm. In particular, the probability of job loss increased for workers with fewer years of service within the group of workers covered by the programme, with an increase of 2.7 pp following the elimination of the subsidy (statistically significant at the level of 1%). The increase is lower for those with 10-17 years of service (1.9 pp) and the elimination of the rebates did not appear to have a significant effect for employees with the most years of service within the firm (over 18 years). This finding might suggest that the high dismissal costs associated with workers with long years of service in the firm may have acted as a sufficient incentive to keep the workers in the firm; accordingly, the elimination of the rebates did not feed through to a greater probability of job loss for this sub-set of workers, although it might also reflect a positive relationship between length of service within the firm and employee productivity.

#### An initial approximation to the cost-benefit analysis of the programme

Overall, the foregoing results indicate that the elimination of the programme of incentives for keeping the over-60s in employment in force from 2006 to July 2012 had a positive effect on the probability of job loss for this group in the short term, which was on a low scale but was particularly significant among workers with the fewest years of service and skills within the group affected. This section makes an initial approach to the approximate cost-benefit analysis of this policy for the public sector. In this connection, on the basis of the probit model results described in the previous section that enable the impact of the elimination of the employment subsidies to be estimated, a calculation is made of the

<sup>9</sup> Within this group, exit from employment is, essentially, towards retirement status, instead of unemployment, reflecting the possibilities for this group of acceding to retirement.

<sup>10</sup> This may be related to the fact that, typically, the productivity of skilled employees tends to increase more with age, even for the final years of working life; hence, it is to be expected that the rebates will be largely ineffective in respect of skilled employment, and that their withdrawal will have few effects.

effect of this loss of employment on the wages and the Social Security contributions which, consequently, cease to be made and the unemployment benefits that are paid to these workers who lose their job. This estimation of the cost entailed by their elimination is compared with the cost that maintaining the incentives programme in force – namely, the cost of the subsidy – would have involved.

The results of a simple comparative statics exercise, in which other dynamic effects associated with the elimination of the subsidies cannot be taken into account<sup>11</sup>, show that the elimination of the incentives is expected to have translated, on our estimates, into a loss of €3.1 million in wages in December 2012, as a result of the workers who lost their job, which in turn would have reduced the revenue stemming from Social Security contributions by €1.1 million. In turn, these job losses are estimated to have raised unemployment benefit expenditure by €1.1 million. Moreover, the discontinuation of the payment of the subsidies resulted in a saving of €41.7 million for the Social Security system in that period, meaning that the estimated net saving for the latter of the elimination of the programme is significant.

The foregoing results are in line with the empirical evidence available on the effectiveness of the programme of Social Security contribution rebates mentioned in the introduction, which tends to evidence a high deadweight<sup>12</sup> component to this type of measure (around 85% in the case under analysis), given that they do not decisively affect firms' employment decisions. In the specific case of the rebates analysed, the results show that most of the programme's expenditure is not recouped in terms of greater labour income of the group of workers affected or via lower expenditure on unemployment benefits. The intuition behind this result is that the incentives managed to maintain employment only for a small sub-set of workers, probably reflecting the fact that the programme's target group already had certain characteristics – permanent contracts and long years of service – that led to them having a relatively low probability of job loss, irrespective of the existence or not of a rebate. The results highlight the need for these types of programmes to be focused on very specific groups with particular employment difficulties, with a view to maximising its effectiveness in terms of job creation or maintenance and minimising its cost for public finances.

It should be stressed, however, that the findings presented in this article are confined to this specific programme of incentives and, therefore, they are not extensible to the set of employment rebates for different groups in force in Spain in the past or at present; nonetheless, they do highlight the need for a detailed assessment of the different programmes of active employment policies in order to detect those that are most effective.

16.11.2017.

## REFERENCES

- BARCELÓ, C., and E. VILLANUEVA (2016). "The response of household wealth to the risk of job loss: Evidence from differences in severance payments", *Labour Economics*, vol. 39, April, pp. 35-54m.
- FONT, P., M. IZQUIERDO and S. PUENTE (2017). *Subsidizing mature age employment or throwing coins into a wishing well: A quasi-experimental analysis*, Documentos de Trabajo, no. 1740, Banco de España.
- GAMBERONI, E., K. GRADEVA and S. WEBER (2016). *Firm responses to employment subsidies: a regression discontinuity approach to the 2012 Spanish labour market reform*, ECB Working Paper Series, no. 1970.

11 For example, there is no information on the behaviour of firms and, therefore, it cannot be analysed whether the elimination of the subsidy gave rise to increased hires of young workers.

12 Defined as the total cost of the programme that is not recouped in terms of higher wages or Social Security contributions or lower unemployment benefits.

- GARCÍA PÉREZ, J. I., and Y. REBOLLO (2009). "The Use of Permanent Contracts across Spanish Regions: Do regional Wage Subsidies Work?", *Investigaciones Económicas*, vol. XXXIII (1), pp. 97-130.
- ILMAKUNNAS, P., and M. MALIRANTA (2005). "Technology, Labour Characteristics and Wage-Productivity Gaps", *Oxford Bulletin of Economics & Statistics*, vol. 67, no. 5, October, pp. 623-645.
- KUGLER, A., J. F. JIMENO and V. HERNANZ (2003). *Employment consequences of restrictive permanent contracts: evidence from Spanish labour market reforms*, CEPR Discussion Paper, no. 3724.
- SKIRBEKK, V. (2004). "Age and Individual Productivity: A Literature Survey", *Vienna Yearbook of Population Research*, 2, no. 1, pp. 133-154.
- TOHARIA, L., J. M. ARRANZ, I. CEBRIÁN, C. GARCÍA SERRANO, V. HERNANZ, G. MORENO and J. PITARCH (2008). "El efecto de las bonificaciones de las cotizaciones de la Seguridad Social para el empleo en la afiliación a la Seguridad Social: un intento de evaluación macroeconómica, microeconómica e institucional", *Informe FIPROS*, 2007/81.