

**EMPLOYMENT, WAGE  
AND PRICE REACTIONS TO  
THE CRISIS IN SPAIN: FIRM-LEVEL  
EVIDENCE FROM THE WDN SURVEY**

**2015**

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**Documentos Ocasionales  
N.º 1503**

**BANCO DE ESPAÑA**  
Eurosistema



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IN SPAIN: FIRM-LEVEL EVIDENCE FROM THE WDN SURVEY**

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ISSN: 1696-2230 (on line)

## **Abstract**

This paper describes the main results from the third wave of the Wage Dynamics Network (WDN) survey. Its main goal is to provide information on demand, finance conditions and other factors determining economic activity, on wage, price and employment adjustments over the period 2010-2013, and on firms' perceptions of institutional changes in the labour market. In Spain, the survey was conducted at the end of 2014, collecting information from a representative sample of 1,975 Spanish firms covering manufacturing, energy and market services sectors. The main results show that Spanish firms' adjustment to falling demand and other negative conditions since 2010 relied heavily on the dismissal of employees under temporary contracts, although those firms most affected by the crisis also significantly reduced permanent employment. On the contrary, wage and hours adjustments remained limited even in those firms most severely affected by the negative shocks. Regarding institutional changes, Spanish firms perceive some easing in the conditions for economic layoffs, attributing the main source of this higher flexibility to legal changes since 2010. As to other labour conditions, including wages and hours, the share of firms perceiving higher flexibility is somewhat lower.

**Keywords:** survey, wages, employment, shocks

**JEL classification:** J23, J30, J50.

## Resumen

Este documento describe los principales resultados de la tercera ola de la encuesta española sobre formación de salarios realizada en el marco de la red de investigación del ESCB sobre la dinámica salarial (WDN, por sus siglas en inglés). Su principal objetivo es proporcionar información sobre la demanda, las condiciones de financiación y otros factores que determinan la actividad económica, sobre los ajustes salariales, de precios y de empleo en el período 2010-2013, y sobre la percepción de los cambios institucionales en el mercado de trabajo de las empresas. La encuesta se realizó a finales de 2014 a partir de una muestra representativa de 1.975 empresas españolas que cubren los sectores de manufactura, la energía y los servicios de mercado. Los principales resultados muestran que el ajuste de las empresas españolas a la caída de la demanda y otras condiciones negativas desde 2010 se basó en gran medida en el despido de los empleados con contratos temporales, aunque las empresas más afectadas por la crisis también redujeron significativamente el empleo permanente. Por el contrario, los ajustes de salarios y horas fueron limitados, incluso en aquellas empresas más afectadas por los *shocks* negativos. En cuanto a los cambios institucionales, las empresas españolas perciben cierta flexibilización en las condiciones de los despidos económicos, atribuyendo esta mayor flexibilidad a los cambios legales desde el año 2010. En cuanto a las demás condiciones de trabajo, incluidos los salarios y las horas, la proporción de empresas que perciben una mayor flexibilidad es algo inferior.

**Palabras clave:** encuesta, salarios, empleo, perturbaciones.

**Códigos JEL:** J23, J30, J50.

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## 1 Introduction

This report presents an overview of the main results of a firm survey conducted under the *Wage Dynamics Network (WDN)* – a joint venture of the *European System of Central Banks* – referred to Spain over the period 2010-2013. The main purposes of the survey were to provide information on demand, finance conditions and other factors determining economic activity, on wage, price and employment adjustments to those factors, and on perceptions of structural and institutional changes in the labour market for a representative sample of firms. Building on two previous surveys conducted in 2008 and 2009 under the same WDN,<sup>1</sup> the aim of this new initiative was to construct a harmonised cross-country microeconomic dataset that could be used for research into a wide array of questions on wage and price setting and the other main instruments of adjustment that firms implement in response to changing economic and institutional conditions.

In what follows, we first put in context the information obtained through the WDN Survey by describing the main macroeconomic and labour market developments in Spain over the period 2010-2013. Then, after briefly describing the main characteristics of the 3<sup>rd</sup> wave of the WDN survey (*WDN3*), we document the sources of changing economic conditions and the firms' wage, price and employment responses to them. Since during the period under study significant labour market reforms modified the institutional context in which firms' decisions were taken, we also focus on how firms perceived these institutional changes and to what extent they think they will lead to different adjustment patterns in the future. Main results show that Spanish firms' adjustment to falling demand and other negative conditions since 2010 relied heavily on the reduction of employees under temporary contracts, although those firms most affected by the crisis also significantly reduced permanent employment. On the contrary, wage and hours adjustment remained limited even in those firms more severely affected by the negative shocks. In the case of wages, the WDN survey shows significant evidence of downward nominal wage rigidity with around 20% of firms freezing wages over the reference period and some decrease in wage indexation, partly due to the recent decrease in inflation. Regarding institutional changes, almost 50% of firms perceive some easing in the conditions for economic layoffs, individual and collective alike, with legal changes since 2010 being the main driving factor of this higher flexibility. On the wage side, the share of firms perceiving higher possibilities for wage adjustment is lower, between one-quarter and one-third for incumbent and entry workers, respectively, and the role of legal changes in this higher flexibility seems to be less relevant. A similar picture emerges regarding hours adjustment, with around 30% of firms declaring higher possibilities to adjust working hours but, as in the case of wages, with a less relevant role for legal changes. In both cases, a change in workers' attitude, possibly related also to the adverse economic conditions, is mentioned as a crucial factor for explaining higher adjustment possibilities.

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<sup>1</sup> See *Wage Dynamics in Europe: Final Report of the Wage Dynamics Network*, available at [http://www.ecb.europa.eu/home/pdf/wdn\\_finalreport\\_dec2009.pdf](http://www.ecb.europa.eu/home/pdf/wdn_finalreport_dec2009.pdf)



## 2 Recent developments in the Spanish labour market: putting the WDN3

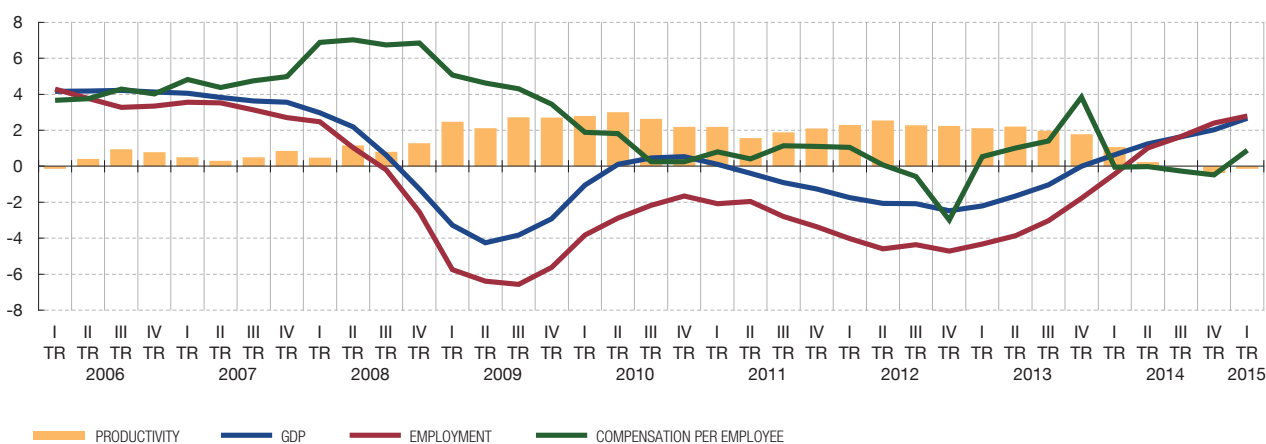
### Survey in context

The impact of the crisis on the Spanish labour market was very intense. From the peak in employment in the third quarter of 2008, more than 3.6 million jobs were lost in the Spanish economy (almost 18%), although the recent recovery has started to reduce this loss. Thus, employment in the first quarter of 2015 stood at a similar level to that recorded in the Spanish economy in 2002 and the employment rate (with respect to the working-age population) has fallen to 57.3%, about 10 percentage points (pp) below the maximum level seen before the crisis. Job losses were highest among workers with temporary contracts (more than 1.7 million between 2008 and 2013), reducing the weight of temporary employment in total employees by almost 9 pp to 23.6% in the first quarter of 2015.

The intensity of job losses reflects the intensity of the decline in economic activity (see Chart 1). Over the reference period of the WDN3 Survey (2010-2013), GDP accumulated a decline of 8%, although the growth observed since the third quarter of 2013 has reduced this cumulative drop to 6.5%. Thus, this sharp deterioration in the labour market seen since the beginning of the crisis in 2008 unfolded in different phases. The initial phase of the crisis was characterised by very sharp job losses, with decreases that exceeded 6%, in annual terms, in several quarters of 2009, driven by the sharp decline in GDP and the upturn in labour productivity. Thereafter, the rate of decline of employment tended to soften, helped by some recovery in GDP over the course of 2010. However, this recovery was not sustained and led to a double-dip recession from early 2011 that once more intensified job losses. In this relapse, although rates of decline in employment were not as sharp as those observed in 2009, employment accumulated a further decline of around another 8% taking it to its cyclical trough in late 2013. Since then, a significant recovery in employment has been observed, allowing growth of 3% in the first quarter of 2015 supported by a parallel recovery in economic activity.

GDP, EMPLOYMENT, PRODUCTIVITY AND WAGES

CHART 1



SOURCE: Quarterly National Accounts, INE.

Regarding labour costs, wages failed to react to the strong deterioration of the labour market in the first phase of the crisis and, indeed, real wages increased in 2008-09, even after controlling for the strong composition effects in employment (see Galan and Puente, 2013). Afterwards, wages started to show a higher sensitivity to cyclical conditions, leading to a decrease in real wages over 2012 and 2013, while since 2014 very low, or even negative, inflation has reduced the scope for further real wage adjustment.

As for institutional changes, Royal Decree-Law 3/2012, approved in February 2012, included a broad set of changes to labour market institutions. With regard to collective bargaining, and in order to increase the degree of decentralisation in a system where most collective agreements are signed at a sectoral level (only around 10% of workers are affected by firm-level contracts), it was established that firm-level agreements should prevail in a broad set of areas (basic wage, supplements, overtime remuneration and the distribution of working hours), with contradictory clauses in industry-level agreements being ineffective. Also, in order to increase firms' internal flexibility, the possibilities were widened for opting out from the terms and conditions contained in the agreement in force. In this case, the situation before 2010 made the possibilities for firms to opt out of sectoral-level agreements practically inexistent, despite adverse economic shocks, given that conditions for opting out were established at the sectoral level. In 2010, a first attempt to increase these possibilities was made, making it easier, under the agreement with workers' representatives, to opt out in the presence of poor economic conditions. The 2012 reform additionally increased these possibilities, simplifying, to some extent, the procedure in the event of disagreement with workers' representatives. Also, this reform allowed unilateral changes to be made to working conditions, including wages and working hours, that exceed the minimum levels established in the collective agreement in instances of an adverse economic situation without the need for reaching an agreement with workers' representatives. Finally, to encourage faster renegotiation, the reform established a maximum limit of one year for the effectiveness of an agreement after its termination.

In the area of dismissal costs and firing procedures, a number of measures were taken. On one hand, the economic grounds for dismissal were re-defined, establishing objective circumstances that justify termination of contract. In particular, it was determined that termination is justified if the firm reports losses (or expects to) or suffers three consecutive quarters of year-on-year declines in sales or revenues. On the other, the amount of compensation payable in the event of unjustified dismissal was reduced; for objective and disciplinary dismissals it was set at 33 days per year of service, subject to a maximum of 24 months' pay (as against 45 days and a maximum of 42 months' pay previously). As for firing procedures, the need for administrative authorisation for collective dismissals was eliminated, as was the obligation on the part of the firm to pay wages for the period between the time of notification of dismissal and final judicial resolution.

In relation to hiring possibilities, a new type of permanent contract, called an "entrepreneurial contract", was introduced for firms with fewer than 50 employees, with a probation period that has been extended to one year and various tax incentives. In addition, some of the terms and conditions of the training and apprenticeship contract and those relating to part-time hiring were made more flexible.

### 3 Main characteristics of the WDN3 survey

The WDN3 Survey was conducted in the September-December 2014 period. The questionnaire included core questions, harmonised with the rest of the participating countries, combined with non-core questions, mostly on price-setting, and some country-specific questions, mostly about recent legislative changes introduced in the Spanish labour market. The initial sample of the survey was of 3,049 firms with more than 5 employees in the manufacturing, energy and market services sectors.<sup>2</sup> Sampling design was stratified by sector and size using a population of firms from the Banco de España Central Balance Sheet Data Office records. Firms' responses were collected on a voluntary basis by an external firm and questionnaires were mainly completed using a web platform. The response rate was 64.8%, so the sample size is 1,975 replies (see Table 1 for the distribution of the response rate by size or industry). Results are presented in this report using firms' weights<sup>3</sup> calculated to adjust for differences in response rates across strata (sector/size) and differences in the sampling probability.

**SAMPLE DISTRIBUTION BY SECTOR AND SIZE AND RESPONSE RATE**

**TABLE 1**

	Initial sample	Share of firms (%)	Replies	Share of firms (%)	Response rate (%)
<b>Sector</b>					
Manufacturing	758	97	506	97	67
Energy	23	3	18	3	78
Trade	916	117	600	115	66
Business services	1,352	173	851	162	63
<b>Size</b>					
0-20	2,280	292	1,441	275	63
20-50	490	63	354	68	72
50-200	214	27	133	25	62
>200	65	8	47	9	72
<b>TOTAL</b>	<b>3,049</b>	<b>100</b>	<b>1,975</b>	<b>100</b>	<b>65</b>

SOURCE: Third wave Spanish WDN Survey.

<sup>2</sup> As in previous WDN surveys in Spain, agriculture, construction and non-market services sectors were excluded.

<sup>3</sup> In some cases, we also use employment weights, in order to check for significant differences across firms' size classes.

#### 4 Sources of shocks between 2010 and 2013 and firms' responses

We now document Spanish firms' perceptions about the size and type of shocks affecting them during the period 2010-2013, and to what extent those shocks led to employment and wage changes. The main results in what follows are: i) falls in demand were very significant and widespread across firms; ii) in response to the shocks, wages were frozen, rather than cut, in a great majority of firms; and iii) employment changes took place mostly through the reduction of the number of employees with temporary contracts.

**CHANGE IN ECONOMIC CONDITIONS BETWEEN 2010 AND 2013**

**TABLE 2**

	Strong decrease	Moderate decrease	No change	Moderate increase
Level of demand	30.1	40.6	13.8	14.3
Domestic demand	27.3	37.5	19.7	14.4
External demand	7.1	23.0	29.9	32.5
Volatility/uncertainty about demand	18.5	26.9	28.0	19.6
Access to external finance	19.7	24.4	50.4	4.7
Customer's ability to pay	19.2	40.3	36.3	3.5
Availability of supplies	3.6	17.8	71.8	6.0

SOURCE: Third wave Spanish WDN Survey.

First, as seen in Table 2, when facing the options of changes in demand, higher uncertainty, problems in access to external finance, reductions in customers' ability to pay and lower availability of supplies, Spanish firms reported that lack of demand was the main problem they had to deal with during this period (more than 70% of firms said they underwent a strong or moderate decrease in demand, while only 15.4% of firms reported their demand to increase over this period. This fall in demand had mostly a national component, since 65% of firms reported a decrease in domestic demand, and only 30.2% a decrease in external demand. Moreover, 40% of firms reported an increase in external demand over this period, which is again consistent with the sound performance of exports.

**DIFFICULTIES IN ACCESS TO FINANCE IN 2010/2013. % FIRMS REPORTING THE FOLLOWING AS RELEVANT OR VERY RELEVANT**

**TABLE 3**

	Transitory	Partially persistent
Credit was not available	To finance working capital	32.7
	To finance new investment	32.9
	To refinance debt	29.6
Conditions were too onerous	To finance working capital	38.5
	To finance new investment	38.1
	To refinance debt	34.5

SOURCE: Third wave Spanish WDN Survey.

Besides demand, firms also reported that financial difficulties were widespread: 44.1% of firms perceived a worsening in their access to external finance, and 59.4% also suffered from a diminished ability of their customers to pay. As seen in Table 3, financial problems came mostly in the form of overly onerous credit conditions, rather than non-availability of credit, with not many significant differences across the required credit in terms of end-purpose (financing working capital, new investment or refinancing debt).

As for the duration of the shocks (see Table 4), most of the shocks were perceived as, at least, partially persistent or permanent; only around 25% of firms reported they expect these changes to be transitory. Differences are small across the shocks considered, and it is noteworthy that even after financing conditions have been normalised, 28.3% of firms still perceive changes in access to external finance to be permanent in nature.

**DEGREE OF PERSISTENCE OF THE DIFFERENT FACTORS AFFECTING FIRMS OVER 2010-2013**

**TABLE 4**

	Transitory	Partially persistent	Permanent
Level of demand	26.7	46.8	26.4
Volatility/uncertainty about demand	23.8	51.1	25.1
Access to external finance	24.8	46.9	28.3
Customer's ability to pay	25.9	51.1	23.0
Availability of supplies	26.5	52.3	21.2

SOURCE: Third wave Spanish WDN Survey.

Regarding differences in the impact of different shocks on firms according to the sector of activity or size, the share of firms reporting a fall in demand was higher in services sectors than in manufacturing and utilities (see left-hand panel of Chart A1 in the Appendix), which is consistent with the higher decrease in domestic demand over this period. Also, across sectors of activity, there is a significant negative correlation between the share of firms reporting a fall in demand, and value added changes estimated by National Accounts (see right-hand panel of Chart A1 in the Appendix).

As for differences across firms, we provide some estimates of the marginal effects of some firms' characteristics on the incidence of the shocks (see Table A1 in the Appendix). The main results suggest a higher negative impact of the crisis on smaller firms, which reported both higher falls in demand and greater difficulties in access to credit, with no significant differences in this regard across sectors of activity or other firm characteristics, such as ownership.

#### **4.1 Prices and costs**

The smaller fall in foreign demand relative to domestic demand translated into a lower share of firms decreasing prices in foreign markets than in domestic markets (31.2% vs 46.1%, see Table 5). This behaviour is also consistent with firms' perceptions about changes in the degree of competition in both segments of the market: 63.4% of firms report that competition increased over this period in the domestic market, while only 53.6% perceived this increase in the external market.

	Strong decrease	Moderate decrease	No change	Moderate increase	Strong increase
<b>Prices</b>					
Domestic market	16.85	29.24	35.26	16.51	2.14
External market	7.87	23.30	49.77	17.99	1.14
<b>Competitive pressure</b>					
Domestic market	2.25	6.84	27.54	27.89	35.49
External market	2.46	3.92	39.99	29.77	23.86

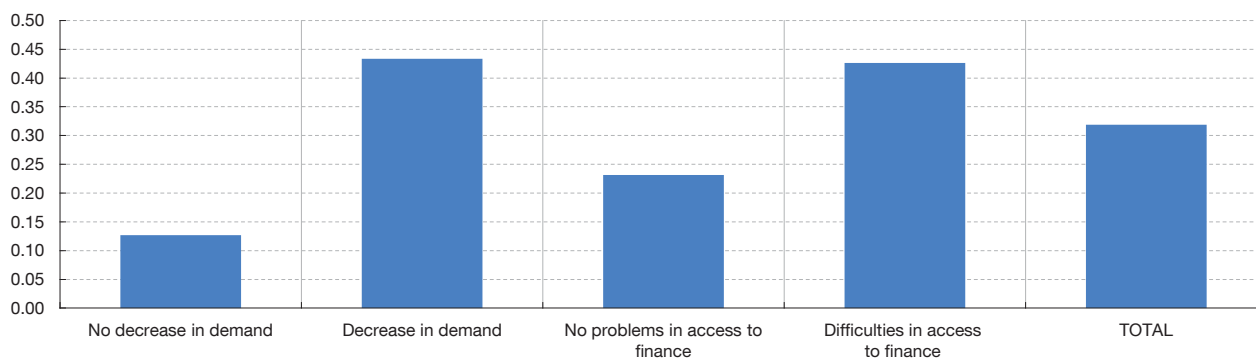
SOURCE: Third wave Spanish WDN Survey.

However, in this situation of lower demand, lower prices and higher competition, Spanish firms seem to have faced relevant difficulties in adjusting their costs: more than 50% of Spanish firms reported an increase in total costs over this period as a result of increasing labour, financing and intermediate input costs.

A relevant share of firms (close to 33%) managed to reduce their costs, in particular their labour cost component, while the share of firms who were able to reduce financing costs was smaller. Reductions were more prevalent in those firms most affected by negative shocks (Chart 2): around 43% of firms affected by a decrease in demand or increasing difficulties in access to finance reported a decrease in labour costs, while these percentages were 12.3% and 23.2%, respectively, in those firms not negatively affected by these shocks.

% FIRMS ADJUSTING LABOUR COSTS DEPENDING ON THE TYPE OF SHOCK

CHART 2



SOURCE: Third wave Spanish WDN Survey.

#### 4.2 Adjusting labour costs: employment and wage changes

Regarding labour costs, in Table 6 we document that a large fraction of Spanish firms did not reduce their labour costs between 2010 and 2013 despite the tough economic conditions. A first reason was increases in base wages over this period (53.4%), although most firms reported this increase as moderate (Table 7), while reductions in base wages were quite infrequent (observed only in 7.5% of the firms).

**EVOLUTION OF COSTS BETWEEN 2010 AND 2013**
**TABLE 6**

	Strong decrease	Moderate decrease	No change	Moderate increase	Strong increase
Total costs	7.52	22.72	17.60	41.74	10.43
Labour costs	7.86	20.71	28.68	36.25	6.50
Financing costs	3.40	10.57	36.71	33.76	15.56
Intermediate product costs	2.42	13.76	34.69	40.79	8.34

SOURCE: Third wave Spanish WDN Survey.

**CHANGES IN LABOR COSTS COMPONENTS BETWEEN 2010 AND 2013**
**TABLE 7**

	Strong decrease	Moderate decrease	No change	Moderate increase	Strong increase
Base wage	2.19	5.29	39.17	52.05	1.30
Flexible wage components	3.74	19.97	53.22	22.37	0.70
Permanent employees	6.76	24.56	35.16	29.04	4.48
Temporary employees	11.77	24.49	36.73	23.78	3.22
Working hours per employee	3.41	13.30	67.57	15.16	0.55

SOURCE: Third wave Spanish WDN Survey.

Flexible wage components provided additional room for adjusting labour costs (almost 25% of firms reported a decrease here), but as the weight of these components in total labour costs was rather small (4.2%), the scope for adjusting labour costs by these means was limited. Given the limited adjustments in wages and hours, the main instrument to accommodate the negative shocks was a reduction in the number of employees. These reductions affected mostly employees under temporary contracts. In contrast with other European countries, adjustments of working hours did not seem to play a relevant role (only 16.7% of firms reported a reduction in working hours over this period).

Chart 3 provides some information as to what extent firms' strategies to adjust labour costs varied with the type and the intensity of the shocks. First, in the presence of a moderate fall in demand, the most common strategy for Spanish firms was to adjust temporary employment and flexible wage components (although the share of firms adjusting permanent employment was also relatively large).

However, there was a strikingly low presence of firms, with respect to those not affected by a negative demand shock, that adjusted base wages or hours or hours per employee. In the presence of a strong decrease in demand, permanent employment was the preferred means of adjustment while temporary employment and the adjustment of flexible wage components were less relevant in this regard. It is also noteworthy that, even in the case of a strong decrease in demand, Spanish firms reported severe difficulties in adjusting base wages and only 12.6% of firms reported having been able to reduce them.

Chart A2 in the Appendix shows that firms' responses to financial shocks were similar to those to demand shocks. In the presence of a moderate decrease in the access to finance,



SOURCE: Third wave Spanish WDN Survey.

Spanish firms tried to adjust labour costs by reducing temporary employees and flexible wage components. Only when the lack of finance was most acute did both permanent and temporary employees and, to a lower extent, hours per employee, decrease. As in the case of demand shocks, base wage adjustments were quite infrequent, irrespective of the intensity of the financial shock.

Table A2 in the Appendix provides estimates of the probability to adjust any of the five components of labour costs considered in the WDN3 survey (base wage, flexible wage components, permanent and temporary employment, and working hours per employee). We relate these probabilities to the size and type of shock incurred by the firm, size and sector of activity, and variables that may affect the strategy to adjust wages versus employment such as the type of collective bargaining agreement, having opted out of the collective bargaining agreement in 2013 and the share of temporary contracts. Results indicate that, as expected, the intensity of the negative shock matters and firms most affected by a decrease in demand had to adjust their labour cost, combining the five different alternatives. In any case, it should be noticed that in this regard the impact of a negative demand shock was higher than that of a negative financial shock.

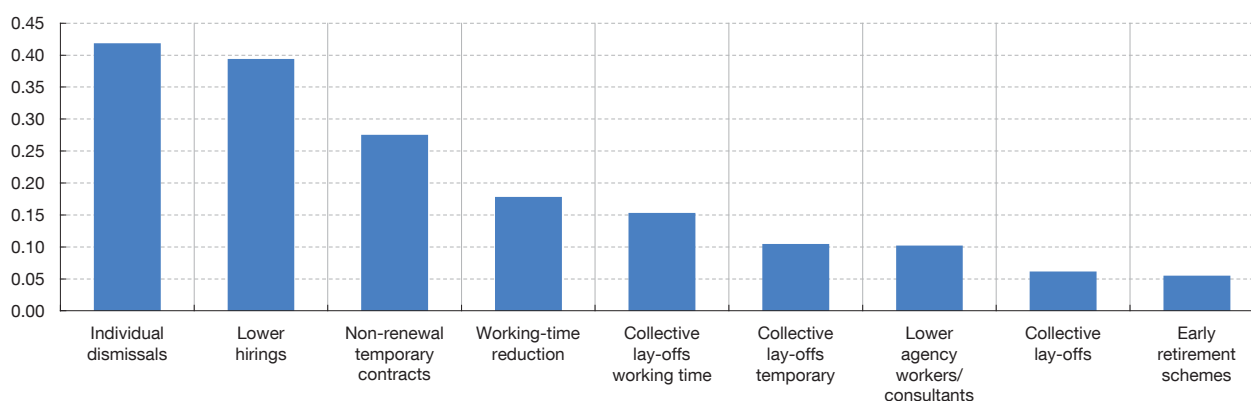
Also, regarding differences across the different components, a negative shock on demand led to the adjustment of employment (permanent and temporary) with higher intensity than the adjustment of either wages or hours. As for differences across firm size, larger firms relied more on the adjustment of flexible components of wages and temporary employment. Although firms in services sectors used all means of adjusting labour costs to a more intense extent, differences across sectors are not very large. More noticeable is the fact that firms with a firm-level collective bargaining agreement adjusted base wage with a higher probability, while opting out of collective bargaining agreements in 2013 is associated with higher probabilities of adjusting all the components of labour costs. Finally, and not surprisingly, a higher share of temporary employment provided for the burden of the adjustment falling upon employees under temporary contracts.



The WDN3 Survey additionally explored how Spanish firms adjusted employment over this period. In particular, it provides information on the incidence of individual and collective dismissals, non-renewal of temporary contracts, freezes in new hires and the use of early retirement schemes. In Chart 4, we plot the share of firms reporting that each of the different strategies were relevant or very relevant when adjusting their employment levels over the period 2010-2013<sup>4</sup>. It can be observed that reductions in employment were mainly through individual dismissals and non-renewal of temporary contracts, although the decrease in new hires was also quite frequent. These data are in line with the observed increase in gross job flows seen in Spanish LFS data, which show a large increase in employment exits since the beginning of the crisis along with a marked decrease in hires. On the contrary, collective lay-offs and working hours adjustments played a minor role in the reduction of employment. Chart A4 in the Appendix shows some relevant differences across firms of different size in this regard. In particular, the non-renewal of temporary contracts was the main way to adjust employment in very large firms and these firms, more intensively than smaller ones, also used other ways to adjust their labour force, such as temporary collective lay-offs, reduction of agency workers, collective lay-offs and early retirement schemes.

WAYS TO REDUCE EMPLOYMENT

CHART 4



SOURCE: Third wave Spanish WDN Survey

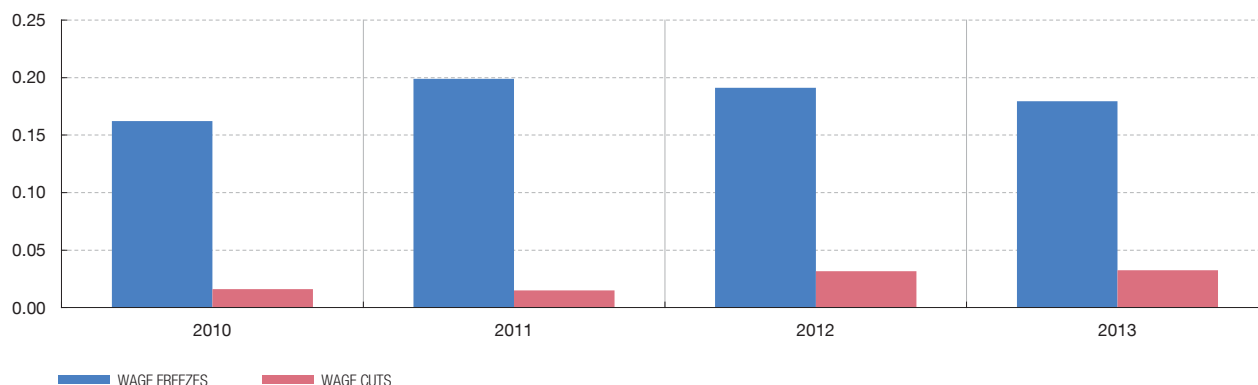
As for wage adjustments, Table 7 confirms that the proportion of firms reducing base wages over this period was quite small, while some adjustments in the flexible component of wages were more frequent. This issue is further investigated in the WDN3 Survey by requiring information about the incidence of wage cuts and wage freezes, the relevance of inflation adjustment clauses in wage changes, and alternative ways to adjust wages.

As for wage cuts and wage freezes, the data collected by the WDN3 Survey show (see Chart 5) an increasing relevance of nominal wage rigidities, as the share of firms reporting wage freezes reached almost 20% between 2011 and 2013, rising from close to 15% in 2010

<sup>4</sup> In Chart A3, we plot the same type of information using employment weights instead of firm weights. The picture is quite similar, with individual dismissals and non-renewal of temporary contracts being the main ways to adjust employment once we take into account the employment share of firms interviewed in the sample.

## INCIDENCE OF WAGE CUTS AND WAGE FREEZES

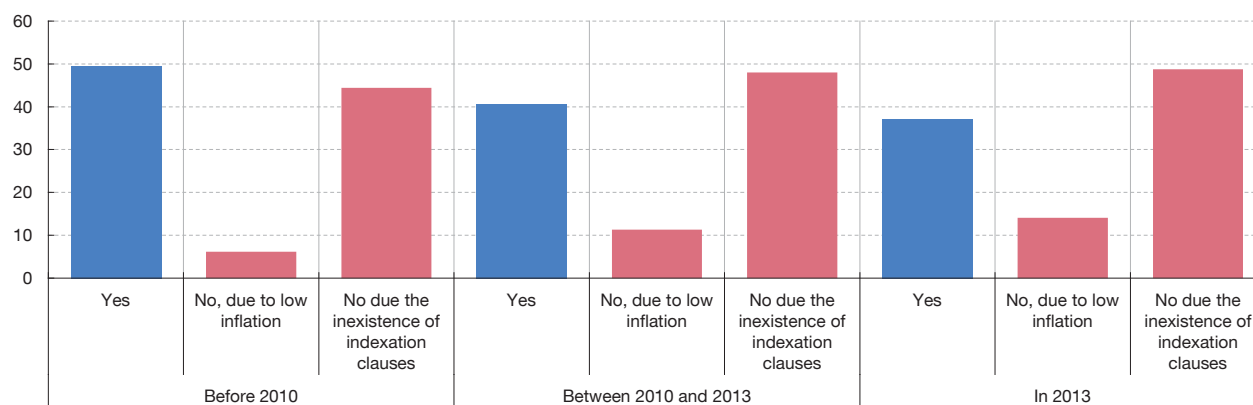
CHART 5



SOURCE: Third wave Spanish WDN Survey.

## INDEXATION

CHART 6



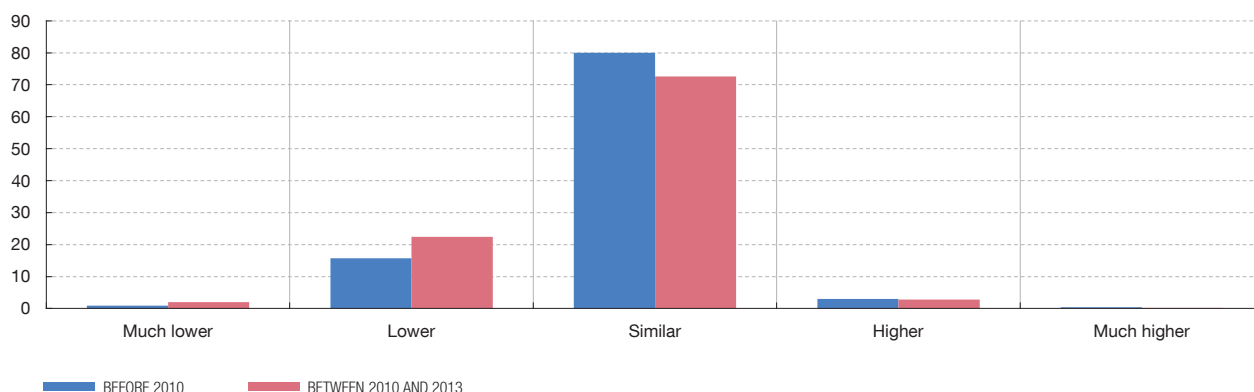
SOURCE: Third wave Spanish WDN Survey.

and from much lower figures in the pre-crisis period (around 2% in 2008 according to the WDN1 survey). This evidence is also consistent with the information provided by Social Security records.<sup>5</sup> Despite the intensity of the crisis, only 3.3% of firms reported having cut wages to their employees in 2013, although this percentage was moving on a slightly increasing path from 1.6% in 2010 (according to WDN1, wage cuts were practically inexistent in the pre-crisis period).

As for indexation, most Spanish collective bargaining agreements used to include cost-of-living allowances adjusting wages to inflation. However, during the crisis, the proportion of firms applying this type of wage adjustment declined (see Chart 6). In particular, the share of firms reporting that wages were indexed to inflation decreased from about 50% in the period prior to 2010 to 37.2% in 2013.<sup>6</sup>

<sup>5</sup> According to this information, wage freezes accounted for around 30% of job-stayers in the private sector.

<sup>6</sup> It should be noticed that in the WDN1 survey, around 70% of Spanish firms reported some relationship between wages and inflation.



SOURCE: Third wave Spanish WDN Survey.

Among the reasons behind this lower incidence of wage indexation, low inflation seems to be the main factor: in 2013, 14.1% of firms stated that it was the main reason for not adjusting wages to inflation. Moreover, we also find an increasing share of firms reporting the inexistence of inflation-adjustment clauses, which is in line with the information provided by statistics on collective bargaining agreements. Finally, as for wages for new hires, 24.4% of firms reported them to be lower than for incumbent workers over the period 2010-2013, while this share was 16.6% before 2010 (see Chart 7).

Regarding other ways to facilitate wage adjustments, only 3.4% of Spanish firms reported having opted out of collective agreements in 2013. This is not a high percentage, especially when we take into account that in 2012 another labour market reform tried to increase firms' opt-out possibilities in order to minimise the needs to adjust employment. In any case, it should be noted that the use of opt-outs was not uniform across firms. In particular, as can be seen in Table 7, opt-outs were mainly used by very large firms opting out from their own firm-level agreement. Thus, this possibility was mainly used by these firms as an additional tool to renegotiate the labour market conditions of their own collective agreement. Furthermore, the share of small and medium size firms opting out from sectoral agreements was fairly low in 2013. Moreover, the 2012 labour market reform additionally eased conditions for unilateral modifications of those labour conditions set above the minimum level stipulated by collective agreements. In Table 8, we can also observe how these flexibility measures have been more

OPT-OUTS AND OTHER FLEXIBILITY MEASURES BY FIRM SIZE

TABLE 8

	Less than 20	20-50 emp	50-200 emp	More than 200 emp	Total
Opt-out from					
Sectoral agreements	3.9%	3.3%	2.0%	5.9%	3.7%
Firm-level agreements	1.3%	3.5%	0.0%	16.6%	1.9%
Other flexibility measures	14.3%	19.3%	18.9%	25.1%	15.6%

SOURCE: Third wave Spanish WDN Survey.

frequent than opt-outs (15.6% of firms), although again, they have been used mostly by larger firms (25.1% of firms with more than 200 employees have used these measures while only 14.3% of firms under 20 employees reported having used them in 2013). Overall, these figures are in line with information on the use of the flexibility mechanisms provided by *Encuesta de Coyuntura Laboral* and the *Encuesta Anual Laboral* surveys conducted by the Spanish Ministry of Employment.

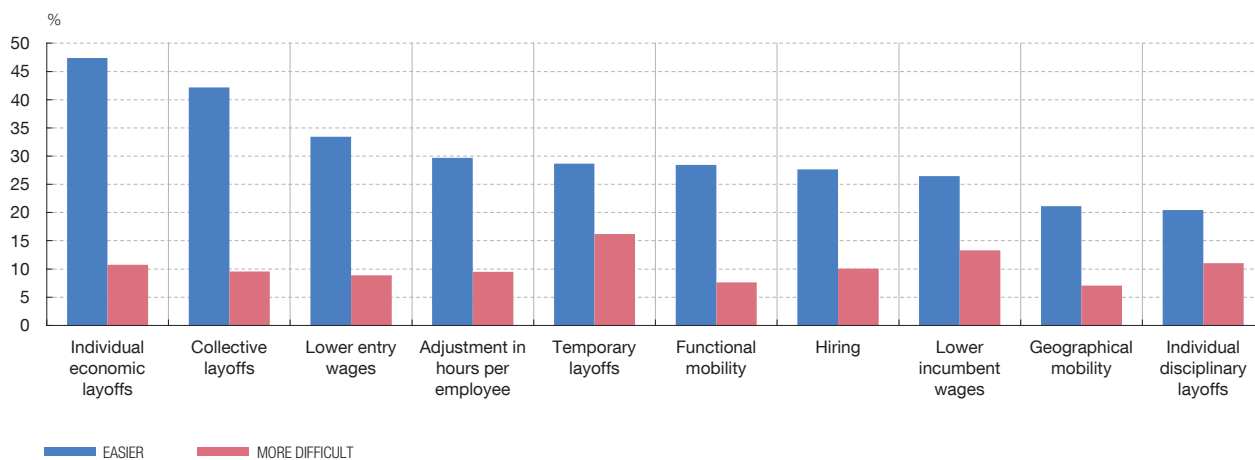
### 4.3 Firms' perceptions on labour market reforms

The WDN3 Survey also questioned employers on their assessment of the recent legal amendments to the main institutions in the labour market. In particular, firms were asked to reply whether they considered that in 2013, in comparison with the situation in 2010, it was easier or more difficult to adjust labour costs in their firm adopting each of the decisions shown in Chart 8. As can be seen in this chart, almost 50% of firms replied it was now easier to lay off workers based on economic reasons than it was in 2010, while only 10.8% of firms stated that it was now more difficult. According to employers' perceptions, adjusting the level of employment was also easier in 2013 using collective lay-offs (for 42.7% of firms), while the change in labour conditions in the form of adjusting hours per employee (29.7%) and occupational mobility also seems to be easier in 2013 than it was before (28.4%). On the wage side, one-third of firms report that lowering new entrants' wages in the firm has become easier, while adjusting wages of incumbent workers is easier only for 26.5% of firms.

These changes in the firms' perceptions about the difficulties surrounding the different mechanisms to adjust their labour costs may be related to the labour market reforms approved in the Spanish economy over the recent period, but the impact of the severe and long-lasting crisis may also be playing a relevant role in facilitating some of these changes. To ascertain to what extent these legal amendments may explain these changes, the WDN3 Survey also requested employers to reply about the main factors behind these changes, allowing them to

CHANGES IN THE POSSIBILITIES TO ADJUST LABOUR COSTS BETWEEN 2013 AND 2010

CHART 8



SOURCE: Third wave Spanish WDN Survey.

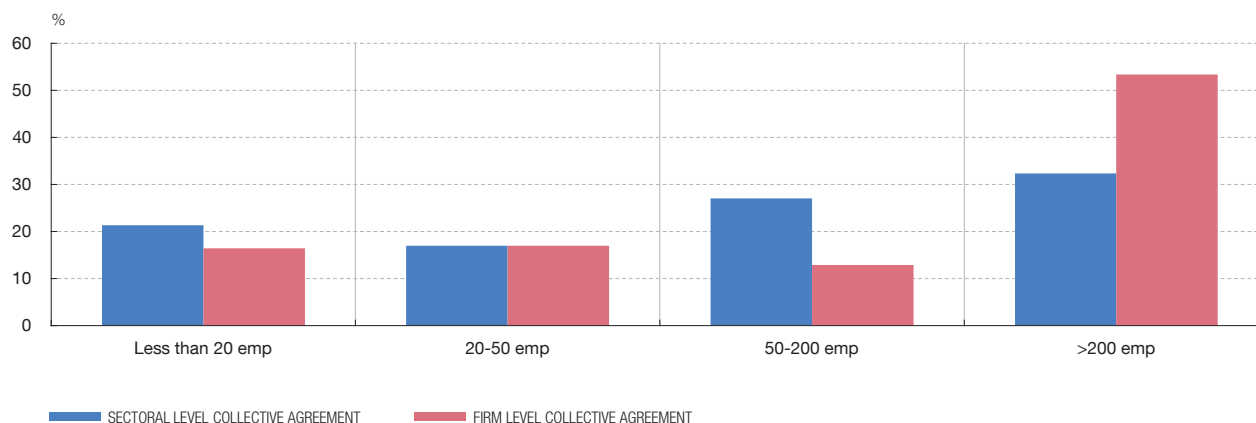
	Individual economic layoffs	Collective layoffs	Lower entry wages	Adjustment in hours per employee	Temporary layoffs	Functional mobility	Hiring	Lower incumbent wages	Geographical mobility	Individual disciplinary layoffs
% firms declaring it is easier	47.4	42.2	33.5	29.7	28.7	28.5	27.7	26.5	21.1	20.4
due to										
Reforms of labour laws	75.6	83.4	45.0	43.8	64.7	40.2	70.8	54.0	48.9	31.7
Enforcement of laws	15.7	12.8	10.0	11.3	9.5	9.1	13.5	9.8	8.8	39.0
Unions behaviour	1.3	1.3	2.2	2.3	0.9	1.0	2.3	2.2	0.8	4.7
Workers attitude	7.4	2.5	42.9	42.5	25.0	49.7	13.4	34.1	41.4	24.7

SOURCE: Third wave Spanish WDN Survey.

choose between changes related to legal amendments, changes in the enforcement of the law, changes in unions' behaviour or changes in workers' attitudes. Table 9 shows that most firms reporting that it is easier to adjust the level of employment using economic dismissals (individual or collective) replied that changes in labour laws are the most relevant factor behind this easiness (between 75.3% and 83.4% in the case of individual and collective dismissals, respectively), although enforcement of the law has also played a role in this connection over this period. On the contrary, when we analyse which factors may explain higher wage flexibility, firms' replies tend to show that, although legal changes also matter, individual workers' attitudes have been a key factor in explaining higher flexibility since 2010. A similar picture emerges when we look at factors behind easiness in changes in working conditions (hours, mobility) where firms tend to reply that recent legal changes have a similar relevance to the change in workers' attitudes.

Moreover, labour market reforms in Spain since 2010 have tried to facilitate the use of opting-out mechanisms in order to increase wage flexibility in a collective bargaining mechanism characterised by the prevalence of sectoral-level agreements. In the previous section, however, we showed that these mechanisms have been relatively infrequent, with the exception of large firms that have used these new possibilities to renegotiate their firm-level agreement. The survey also requested some information about how firms perceive opting-out procedures having been eased in the more recent period. In Chart 9 we plot the share of firms reporting that opting out was easier in 2013 than it was in 2010 by firm size and the type of collective agreement of the firm. Very large firms (more than 200 employees) have clearly perceived an easiness of the procedure to implement and opt out of the collective agreement, especially those with a firm-level agreement (53.5%). On the contrary, a relatively small share of smaller firms stated that this procedure was easier following the different legislative changes introduced since 2010.

In order to further explore the reasons behind the low share of firms using opting-out mechanisms over this period despite the adverse economic situation facing them, the WDN3

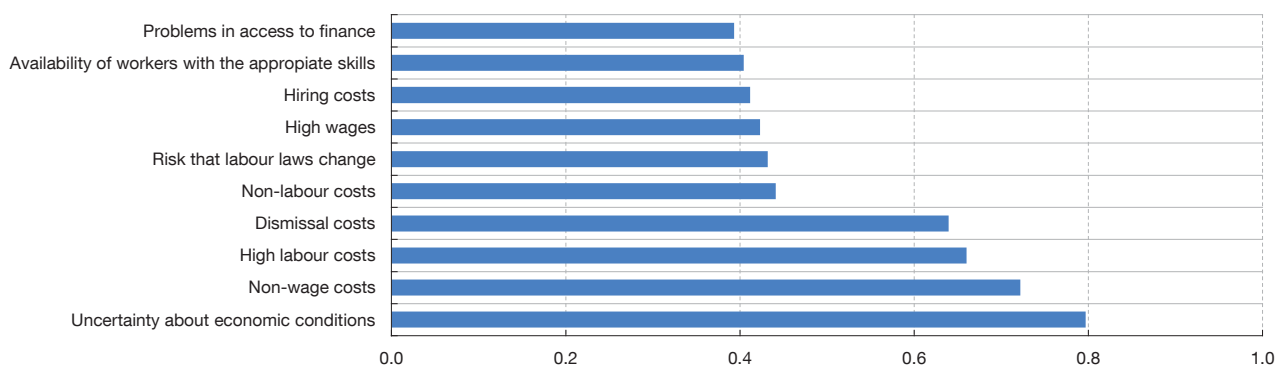


SOURCE: Third wave Spanish WDN Survey.

Survey included a question about the possible reasons why these mechanisms were not easier in 2013 than in the past to those firms reporting that this was the case. Charts A5 to A7 in the Appendix show that most firms seem to be reluctant to use opt-outs owing to reasons related to their potential negative impact on workers' effort or morale and firms' reputation. It is telling that these reasons seem to be playing a relevant role irrespective of firm size, except in the case of very large firms with a firm-level agreement. Regarding the legal procedure, around 50% of Spanish firms state it is still too complicated and/or costly, although smaller firms do not tend to see greater difficulties than larger firms. Again, the only exception is observed among larger firms which report greater legal difficulties in the case of opt-outs from sectoral agreements (69% of firms), but this share is significantly lower among these firms when they are opting out of a firm-level agreement.

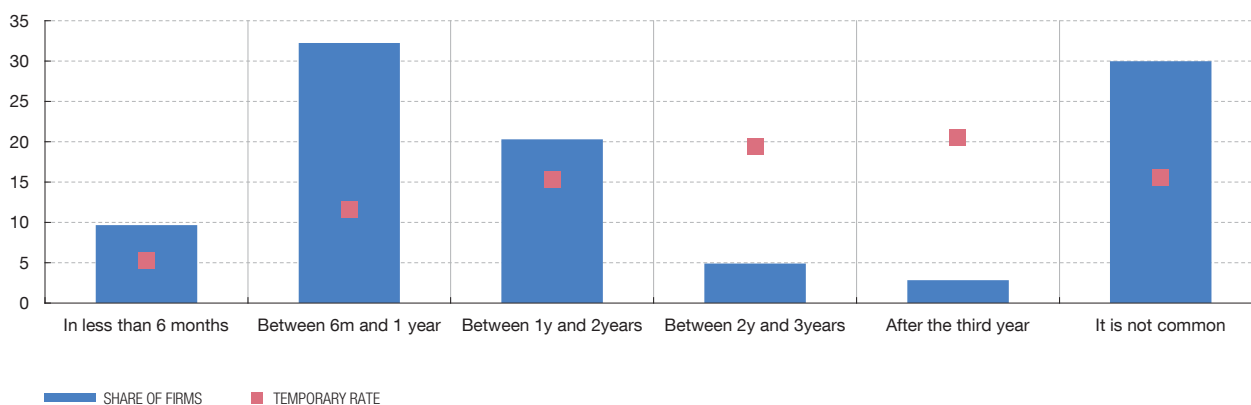
#### 4.4 Main obstacles to new permanent hires

Since 2008, not only did job destruction rapidly increase but also the job creation rate initiated a negative trend that has only quite recently been halted. In particular, since the beginning of 2014 we have observed an incipient recovery in the job creation rate although it is still quite moderate and mostly concentrated in temporary and part-time jobs. In this respect, the WDN3 Survey explored the main reasons that could be limiting permanent hires in the Spanish labour market. In this regard, most Spanish firms (close to 80%) report that uncertainty about economic conditions is an obstacle to permanent hires, although high labour costs (in the form of wages, non-wage labour costs) are also mentioned as a constraint for more than 60% of firms (see Chart 10). Dismissal costs are likewise mentioned for a relevant share of firms. On the contrary, although relevant to some extent, problems in access to finance or the existence of a skill mismatch between the unemployed and the requirements of firms seem to be playing a minor role in the lack of permanent hires in the Spanish labour market. However, by firm size, we observe some differences that show higher obstacles for smaller firms. In general, the ranking of different obstacles remain constant across the three categories considered, but for each of them smaller firms report a higher relevance of each of the factors. Differences seem



SOURCE: Third wave Spanish WDN Survey.

WHEN DOES THE CONVERSION TO A PERMANENT CONTRACT USUALLY TAKE PLACE?



SOURCE: Third wave Spanish WDN Survey.

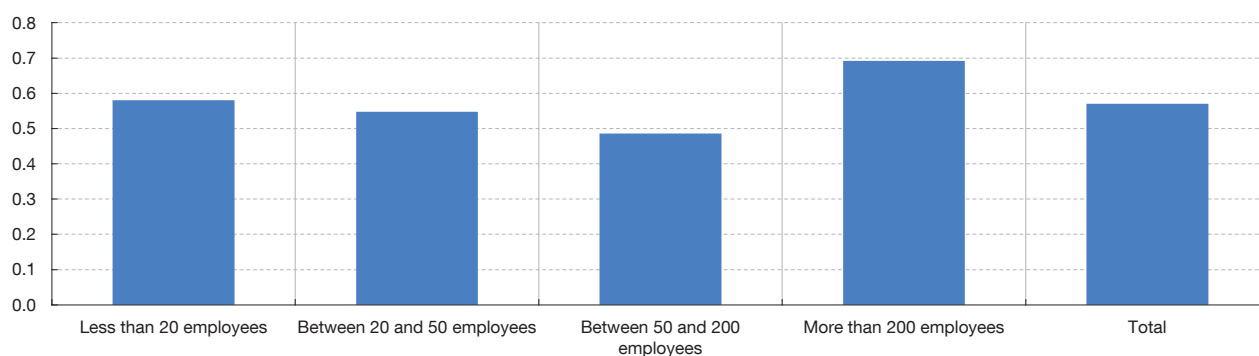
to be more significant in problems of access to finance and in the relevance of wages and non-wage costs as obstacles to permanent hires.

Regarding hiring decisions, the duality between permanent and temporary contracts plays a key role in the Spanish labour market, since most initial hires are made using temporary contracts (more than 90% of total exits from unemployment) and the transition to a permanent contract usually takes place after a long period in the firm. On this issue, in Chart 11 we see how a large fraction of firms report that this transition does not usually take place (30%) while most firms tend to convert temporary contracts into permanent ones after the first six months in the firm. Not surprisingly, the sooner this transition takes place in the firm, the lower the temporary rate is, with those firms reporting the conversion usually occurs after the third year being those with the highest temporary rate in our sample of firms. In Chart A8 in the Appendix we observe some relevant differences according to firm size. In particular, in larger firms (more than 50 employees) conversion to a permanent contract is a more common practice and this conversion usually takes places earlier than in smaller firms.

Finally, we explore firms' opinions about a possible system of Employment Protection Legislation (EPL) that could seek to mitigate the duality in the labour market by having dismissal costs increase with tenure. On average, 57% of firms (representing 65% of employment) would be in favour of this system with more positive views on it from larger firms (almost 70% of larger firms would be in favour, see Chart 12). Concerning the reasons, firms that would prefer this system say that it would provide higher flexibility to firms (82.5%), it would reduce segmentation between temporary and permanent workers (62.5%) and it would be more attractive to new workers in the firm (68.3%). On the contrary, the reasons alleged by firms opposed to this system are uncertainty about dismissal costs (68.2%), the amount of dismissal costs to firms (69.8%) and the potential difficulties of altering labour conditions (54.7%). Charts A9 and A10 in the Appendix show how these perceptions vary across firms' size.

**PERCENTAGE OF FIRMS THAT WOULD PREFER A NEW EPL SYSTEM WITH DISMISSALS COSTS INCREASING WITH TENURE**

**CHART 12**



SOURCE: Third wave Spanish WDN Survey.



## 5 Frequency of price and wage changes

As we show in Section 4.1, the tough economic conditions with lower demand prevailing in most firms led to falling prices at almost 50% of firms in the domestic market. We now analyse to what extent there has been also a change in price-setting behaviour over recent years, relying on the information provided by the WDN3 Survey on how firms set the price of their main product or service both in the domestic and the external market.

Table 10 shows that the share of firms not having an independent pricing policy is relatively small, between 12% in the domestic market and 5% in the external market. Most firms state that their pricing policy consists of setting prices according to costs and a defined mark-up (44% in the domestic market and 48.7% in the external market), looking at their current economic situation to decide on the mark-up. Individual bargaining with customers is also an option for a significant share of firms, especially in the external market (30.8%). Finally, the price in the domestic market is set following the main competitors by 18.7% of the firms, this being a less frequent strategy in the external market (13.9%). Sectoral differences in these pricing strategies tend to show that, in the domestic market, setting prices as a mark-up over costs is more frequent in manufacturing sectors, while in services there is a larger share of firms without an autonomous price-setting policy or with a policy of following the prices of the main competitors.

**PRICE SETTING IN SPANISH FIRMS DEPENDING ON THE DESTINATION MARKET** TABLE 10

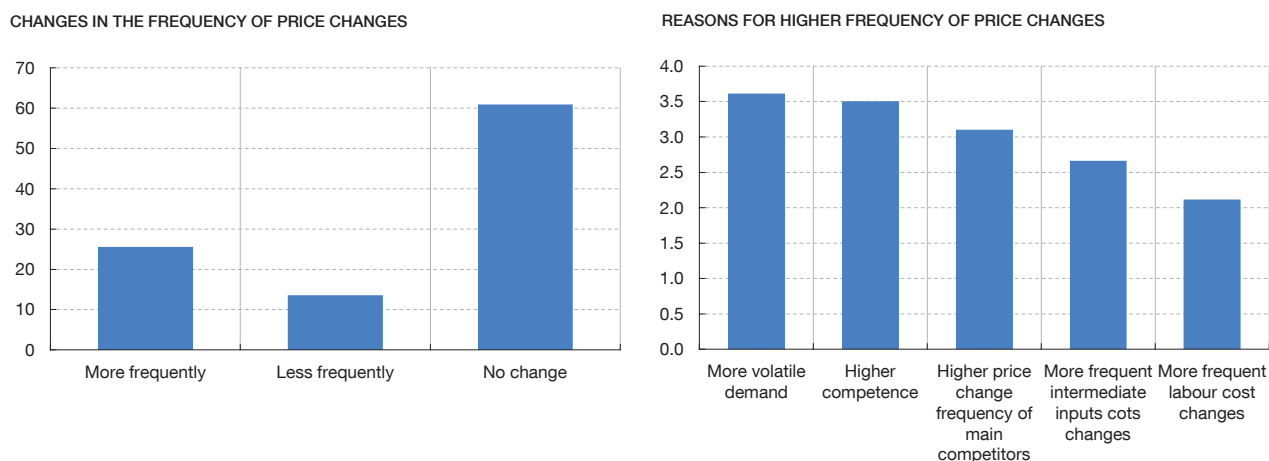
	Domestic market	External market
No autonomous price setting policy	12.04	4.98
The price is set following main competitors	18.69	13.93
The price is set according to costs and a mark-up		
Taking into account economic situation in 2013	32.38	34.16
Taking into account economic situation in 2013 and expected evolution	11.61	14.57
The price is negotiated individually with customers	22.60	30.83
Others	2.68	1.53

SOURCE: Third wave Spanish WDN Survey.

**FREQUENCY OF PRICE CHANGES** TABLE 11

	Total	Manufacturing	Trade	Business services
Daily	8.2	4.4	13.6	5.4
Weekly	5.9	3.8	10.3	2.9
Monthly	11.0	8.2	15.2	8.7
Quarterly	9.4	9.4	11.6	7.0
Biannually	11.2	14.9	9.9	10.2
Yearly	43.4	46.8	33.9	50.2
Less than yearly	10.9	12.6	5.4	15.6

SOURCE: Third wave Spanish WDN Survey.



SOURCE: Third wave Spanish WDN Survey.

Regarding the frequency of price changes, Table 11 shows that a large share of firms report that prices are changed only yearly or even with a lower frequency. In particular, 54.2% of Spanish firms reported this low frequency in changing their prices, this share being higher in manufacturing and business services. On the contrary, price stickiness seems to be lower in the trade sector, with 39.2% of firms saying they change their prices at least monthly (35.2% in the aggregate of the economy). In this regard, a lower frequency of wage changes is reported by firms, since the decrease in the share of firms stating wage change every year (from 52.6% to 42.1%) did not occur as a consequence of more frequent changes. Set against this, the share of firms reporting that wages change every 2 years or less frequently has increased by almost 6 pp. to 17% (see Chart 14).

We also investigated whether, over the more recent period, Spanish firms have increased the frequency of price changes, which could be interpreted as higher price flexibility. As seen in Chart 13, almost 40% of firms have reported a change in the frequency of price changes since 2010 with most of them (25.6%) saying they currently adjust their prices more frequently than before 2010.

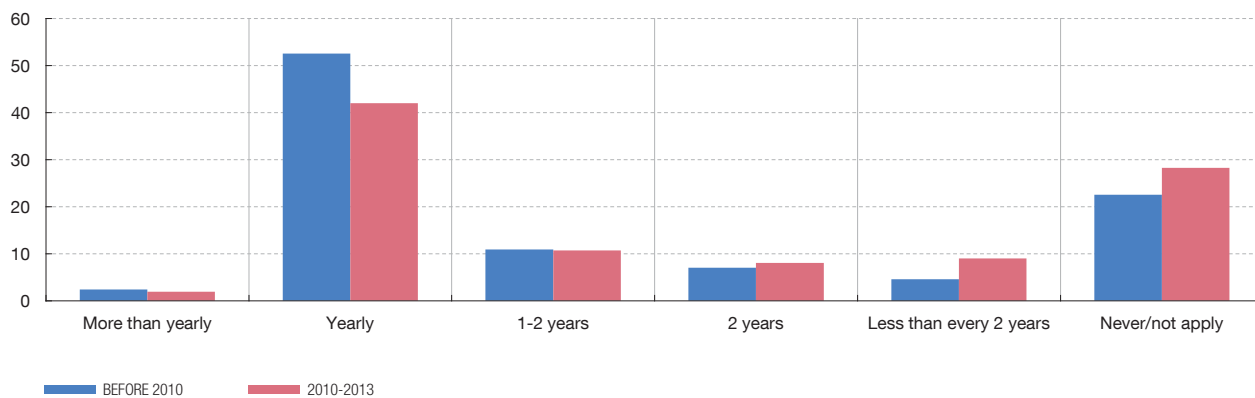
Although no large differences are observed across sectors in this regard, a larger share of firms changing the frequency of price changes is observed in the business services sector (42.1%), with the largest share of firms increasing the frequency of price changes observed in the Trade sector (27.3%). On the reasons behind these changes, firms tend to state that higher demand volatility and a more competitive environment are the key drivers of their higher frequency of price changes. More frequent labour cost changes are the least relevant reason for the higher frequency of price changes, which is consistent with the lower frequency of wage changes reported by firms.

In Table A3 in the appendix we provide estimates on this variable, attempting to control for composition effects. We clearly observe that a higher frequency of price changes is

associated with negative demand and financial shocks, an increase in the degree of competition and higher total costs. While we do not observe, on average, any increase in the frequency of wage changes, those firms that actually increase this frequency tend also to increase the frequency of price changes.

FREQUENCY OF WAGE CHANGES

CHART 14



SOURCE: Third wave Spanish WDN Survey.

## 6 Concluding remarks

This report has documented some preliminary results from the 3<sup>rd</sup> wave of the WDN Survey in Spain. It provides some insights into the nature of the shocks (demand, credit, costs, among others) that affected Spanish firms over the period 2010-2013, when the crisis was most acute. It also offers some pointers as to how firms adjusted to those shocks and to what extent institutional changes in the labour markets are perceived as favourable for the adjustment. In this first summary of the results, we focus on aggregate results although there seems to be some sectoral and firm differences (size, export orientation, ownership) that could also be informative with respect to the adjustment patterns of Spanish firms during the recent crisis. Overall, two main messages seem to arise from the responses of Spanish firms to the WDN3 Survey: i) reducing employment was the main instrument to accommodate negative shocks, while other means of adjustment (such as working hours and wages) played a secondary role; and ii) labour market reforms introduced during the crisis have, at least partially, eased the way so that Spanish firms can adjust to adverse economic conditions.

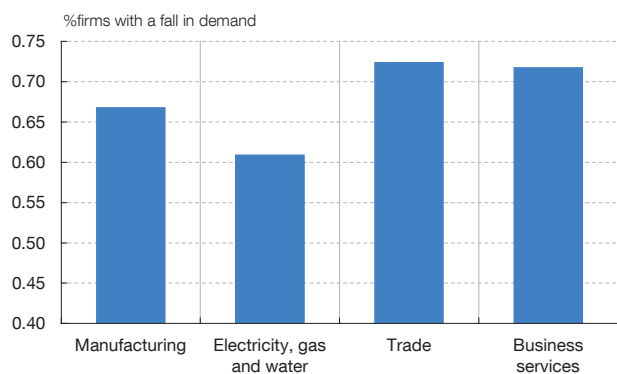
The wealth of microeconomic information in WDN3 and the fact that it provides harmonised information on these matters for 24 European countries make this dataset a very useful source of information for labour market research. In the near future, we plan to merge the information provided by the Spanish Survey with other firm datasets, which will significantly widen the scope of research and policy issues that could be addressed.

## APPENDIX. ADDITIONAL CHARTS AND TABLES

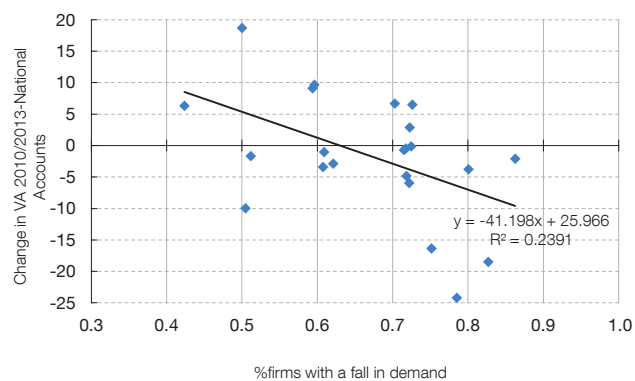
### FALL IN DEMAND BY SECTOR OF ACTIVITY

CHART A.1

DIFFERENCES IN MAIN ACTIVITY BRANCHES



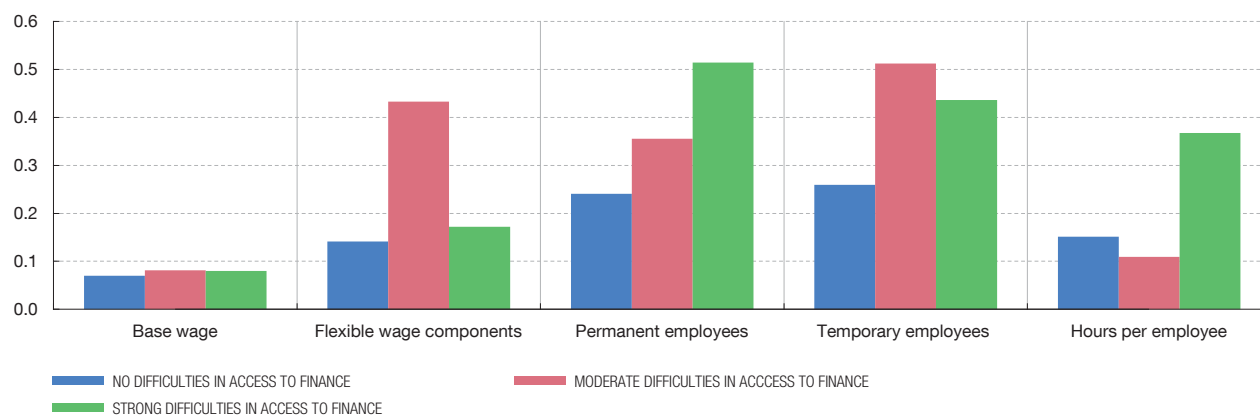
LINK BETWEEN WDN RESULTS AND NATIONAL ACCOUNTS DATA AT THE SECTORAL LEVEL



SOURCES: Third wave Spanish WDN Survey and National Accounts (INE).

### LABOUR COST ADJUSTMENT AND FINANCIAL SHOCKS

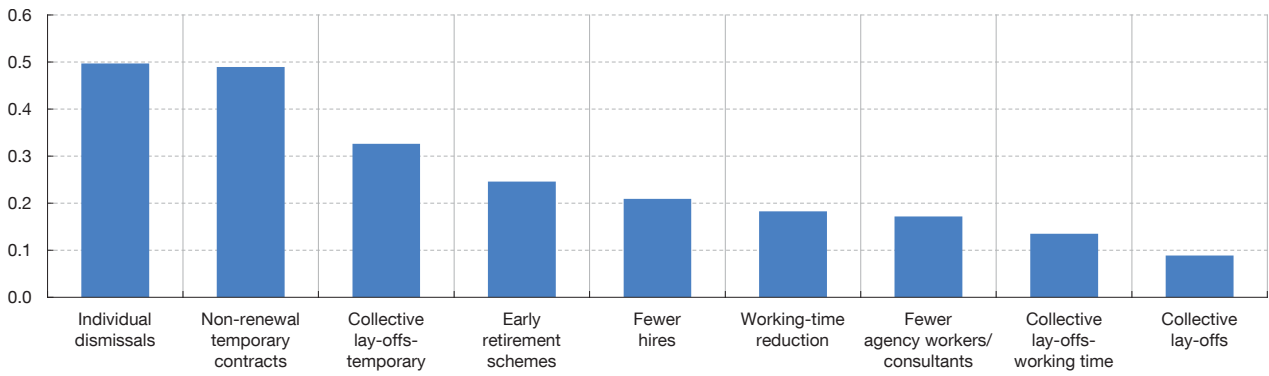
CHART A.2



SOURCE: Third wave Spanish WDN Survey.

WAYS TO REDUCE EMPLOYMENT

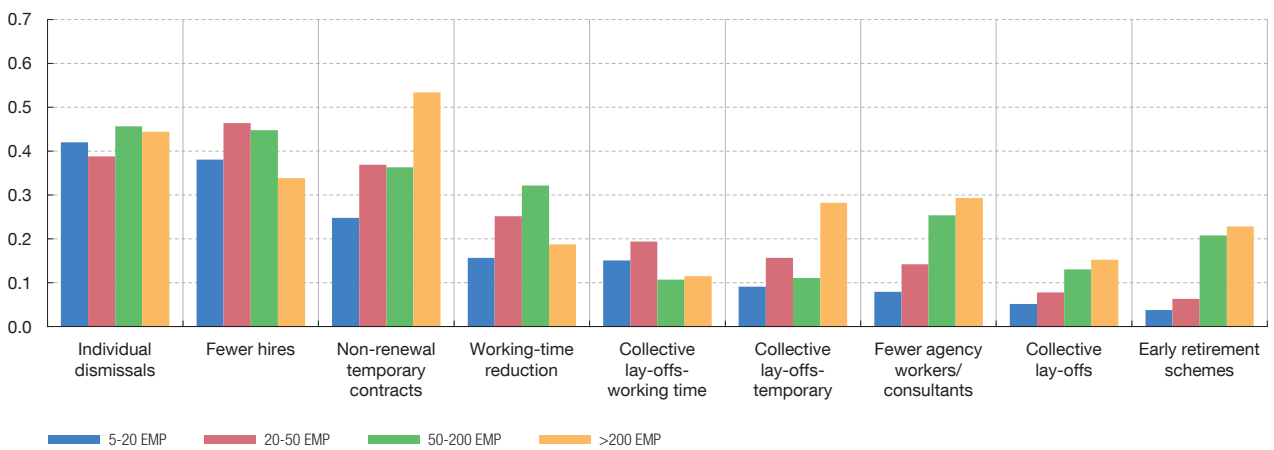
CHART A.3



SOURCE: Third wave Spanish WDN Survey.

WAYS TO REDUCE EMPLOYMENT BY FIRM SIZE

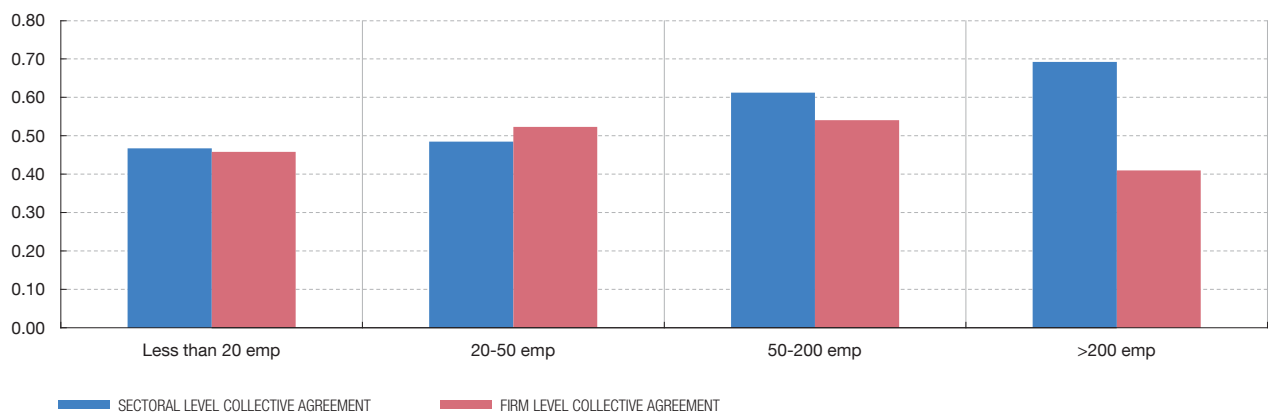
CHART A.4



SOURCE: Third wave Spanish WDN Survey.

OPT-OUTS ARE NOT EASIER OWING TO THE FACT THAT THE LEGAL PROCEDURE IS STILL COMPLICATED AND/OR COSTLY

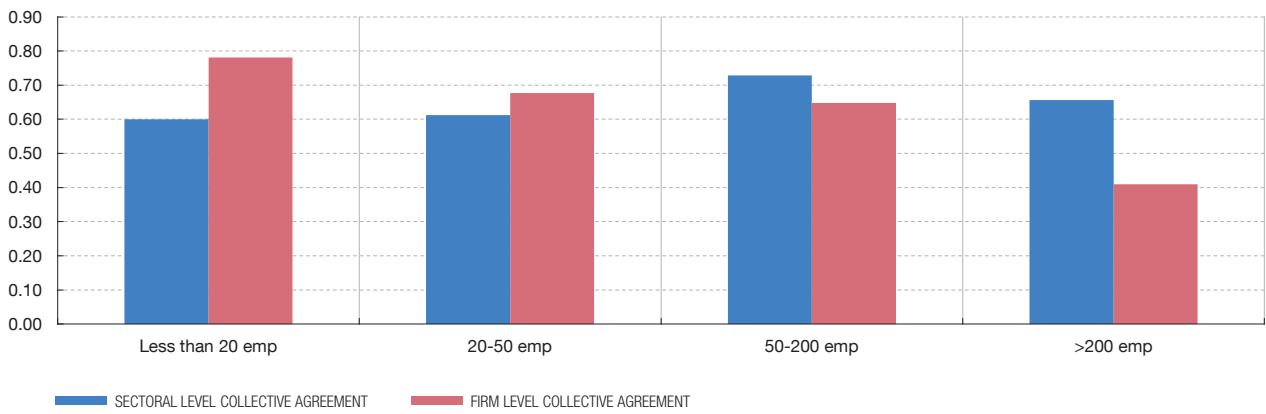
CHART A.5



SOURCE: Third wave Spanish WDN Survey.

**OPT-OUTS ARE NOT EASIER OWING TO THE FACT THAT THEY WOULD BE PERCEIVED AS UNFAIR BY WORKERS**

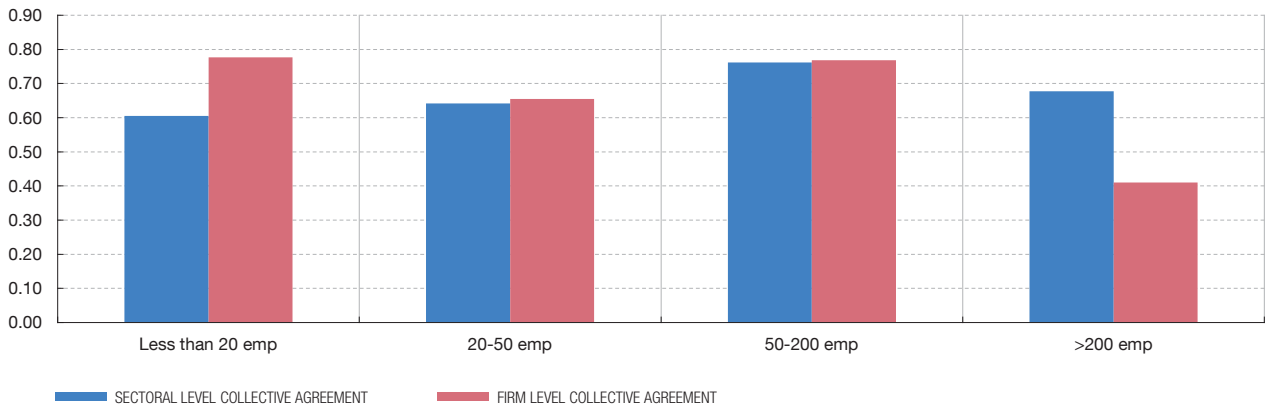
CHART A.6



SOURCE: Third wave Spanish WDN Survey.

**OPT-OUTS ARE NOT EASIER OWING TO THE FACT THAT THEY WOULD AFFECT WORKERS EFFORT MORALE**

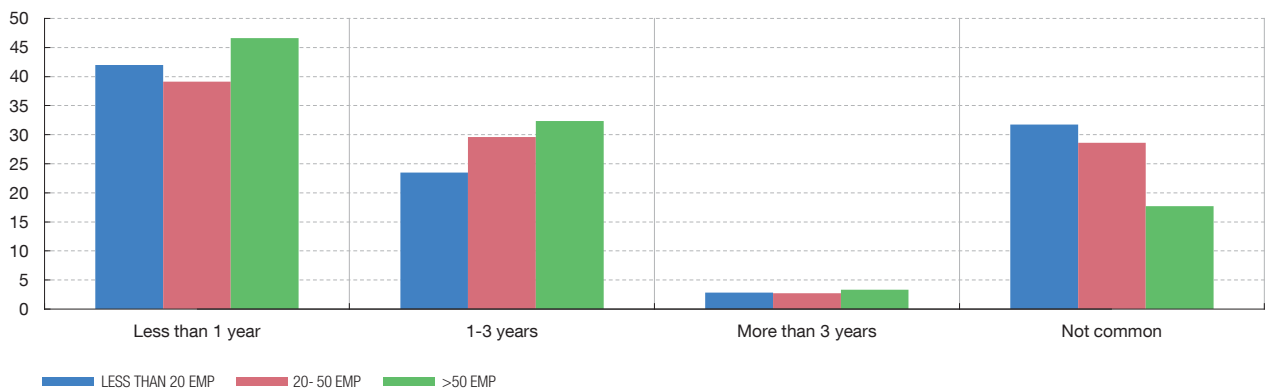
CHART A.7



SOURCE: Third wave Spanish WDN Survey.

**WHEN DOES THE CONVERSION TO A PERMANENT CONTRACT USUALLY TAKES PLACE?**

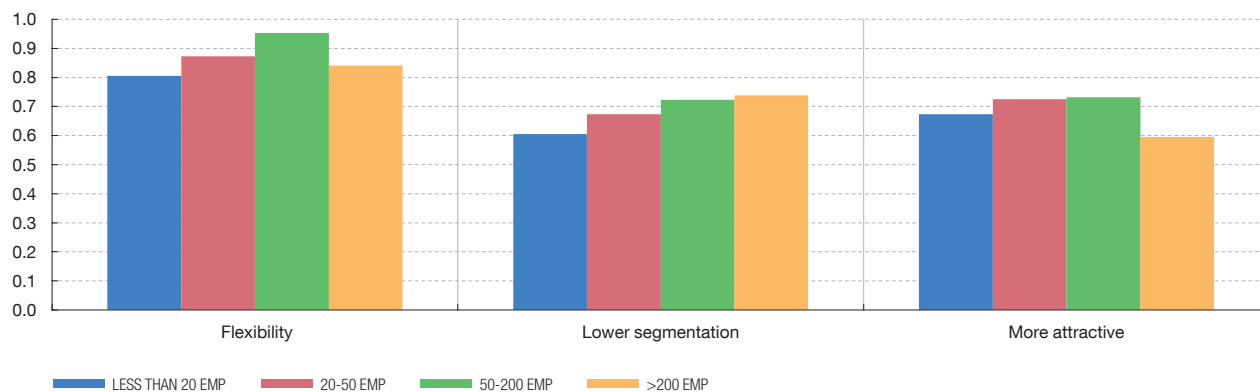
CHART A.8



SOURCE: Third wave Spanish WDN Survey.

ADVANTAGES OF A NEW EPL SYSTEM WITH DISMISSAL COSTS INCREASING WITH TENURE

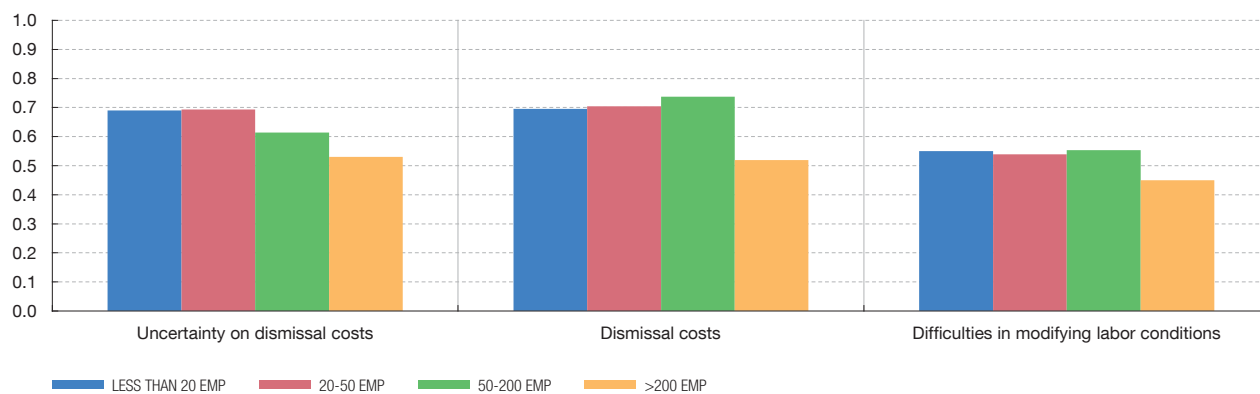
CHART A.9



SOURCE: Third wave Spanish WDN Survey.

SHORTCOMINGS OF A NEW EPL SYSTEM WITH DISMISSAL COSTS INCREASING WITH TENURE

CHART A.10



SOURCE: Third wave Spanish WDN Survey.



**PROBIT ESTIMATES (MARGINAL EFFECTS) ON THE PROBABILITY OF EACH NEGATIVE SHOCK**
**TABLE A.1**

	Demand	Domestic demand	External demand	Access to finance	Customers ability to pay
Utilities	-0.14	-0.09	0.00	-0.18	-0.22
Trade	0.03	-0.03	-0.02	<b>-0.07</b>	0.02
Business services	0.04	-0.01	0.01	-0.03	<b>-0.07</b>
20-49 emp	<b>-0.10</b>	<b>-0.13</b>	-0.03	<b>-0.10</b>	<b>-0.07</b>
50-199 empl	<b>-0.20</b>	<b>-0.15</b>	-0.11	<b>-0.12</b>	<b>-0.10</b>
More than 200 emp	<b>-0.22</b>	<b>-0.20</b>	-0.19	-0.07	<b>-0.21</b>
Subsidiary	-0.05	0.09	0.04	-0.05	-0.08
Multi-establishment	0.04	0.03	-0.01	0.01	0.04
Foreign	-0.04	0.02	0.10	-0.07	0.02
Observed probability	0.70	0.64	0.29	0.44	0.60
Observations	1975				

SOURCE: Third wave Spanish WDN Survey.

NOTE: Bold figures represent significance at 10%.

**PROBIT ESTIMATES ON THE DETERMINANTS OF ADJUSTING EACH COMPONENT OF LABOUR COST**
**TABLE A.2**

	Base wages	Flexible component of wages	Permanent employment	Temporary employment	Hours per employee
Moderate decrease in demand	<b>0.09</b>	<b>0.08</b>	<b>0.21</b>	<b>0.17</b>	<b>0.13</b>
Strong decrease in demand	<b>0.11</b>	<b>0.15</b>	<b>0.46</b>	<b>0.30</b>	<b>0.25</b>
Moderate decrease in access to finance	<b>0.04</b>	<b>0.07</b>	<b>0.10</b>	<b>0.09</b>	<b>0.05</b>
Strong decrease in access to finances	<b>0.04</b>	<b>0.07</b>	<b>0.08</b>	0.04	<b>0.05</b>
20-50 emp	0.01	<b>0.04</b>	0.01	<b>0.09</b>	<b>0.04</b>
50-200 empl	<b>0.05</b>	<b>0.15</b>	0.01	<b>0.11</b>	<b>0.06</b>
>200 emp	0.00	<b>0.17</b>	0.09	<b>0.17</b>	0.05
Utilities	0.00	0.16	<b>0.21</b>	<b>0.29</b>	-0.04
Trade	-0.01	<b>0.05</b>	0.01	-0.01	<b>-0.05</b>
Other services	<b>0.03</b>	<b>0.07</b>	<b>0.05</b>	<b>0.04</b>	0.01
Firm-level agreement	<b>0.03</b>	0.03	-0.01	-0.04	0.00
Opt-out in 2013	<b>0.13</b>	<b>0.09</b>	<b>0.19</b>	<b>0.09</b>	0.06
Temporary rate	-0.04	-0.02	-0.04	<b>0.09</b>	0.03

SOURCE: Third wave Spanish WDN Survey.

NOTE: Bold figures denote significance at 10%.

PROBIT ESTIMATES ON THE PROBABILITY OF HIGHER FREQUENCY OF PRICE CHANGES

TABLE A.3

	DF/DX	z	DF/DX	z
Decrease in demand	0.050	2.23	0.053	2.33
Decrease in access to finance	0.059	2.87	0.058	2.84
Higher degree of competition	0.196	9.53	0.196	9.55
Strong increase in total costs	0.082	2.52	0.085	2.61
20-50 emp	0.008	0.32	0.009	0.33
50-200 empl	-0.032	-0.79	-0.032	-0.79
>200 emp	-0.086	-1.39	-0.085	-1.36
Utilities	0.100	0.89	0.105	0.94
Trade	0.009	0.35	0.009	0.33
Other services	-0.010	-0.39	-0.012	-0.48
Higher frequency of wage changes			0.130	2.37

SOURCE: Third wave Spanish WDN Survey.

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