The Third Wage Dynamics Network Firm Survey: Country Report on Austria

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1 Introduction

1.1 The WDN 3 Survey

This report covers results from the third firm survey on employment and wage adjustment within the Eurosystem Wage Dynamics Network, called WDN 3 survey henceforth. Austria had also participated in the earlier WDN 1 and 2 surveys of end 2007 and summer 2009. Similar in spirit to the earlier surveys, the WDN 3 survey focussed on firms' adjustment to shocks, in particular to the adjustment channels of labor force and wage adjustments. Its aim was to assess recent labor market adjustments and how firms have reacted to the various labor market reforms that had taken place in the years since the Great Recession (with a special attention to countries in need of an internal devaluation within the euro area). The Austrian survey took place in the last quarter of 2014. Most of its questions refer to the period between 2010–2013; this period will subsequently be called the "reference period".

The structure of this report is as follows: The remainder of section 1 deals with the labor market performance of the Austrian economy in the aftermath of the Great Recession. Some information on the role of collective agreements and other institutional characteristics of the Austrian labor market is given as well. Section 2 provides information on the survey and on firm and worker characteristics. Section 3 presents the main survey results. Following the structure of the survey, results on the sources and the size of shocks are presented first. Then, results on labor force adjustments and on wage adjustments are shown. Section 4 touches upon the relationship between labor force and wage adjustment on the one hand, and demand and credit shocks on the other hand. Section 5 compares the reactions of firms to demand shocks of WDN 3 with the earlier survey results of WDN 1 and 2. Finally, section 6 provides a short summary.

1.2 Austria's Labor Macroeconomic Performance Since the Great Recession

The Austrian labor market withstood the Great Recession comparatively well. Although the recession had been deep (real GDP fell by 4.6 percent between 2008Q2 and 2009Q2) and comparable to most other EU countries, unemployment rose relatively moderately from 4 to 5.5 percent (figure 1). Similarly, the reduction in employment, measured in persons had also been muted. However, as figure 2 reveals, there had been a very strong downward adjustment of working time: Whereas the number of employed workers fell by 1.3 percent between 2008Q3 and 2009Q3 the decrease in working hours amounted to 4.1 percent.[2] Compared to other European countries, Austrian firms had engaged very strongly in labor hoarding (European Commission, 2009). For larger industrial firms this had been facilitated by well-

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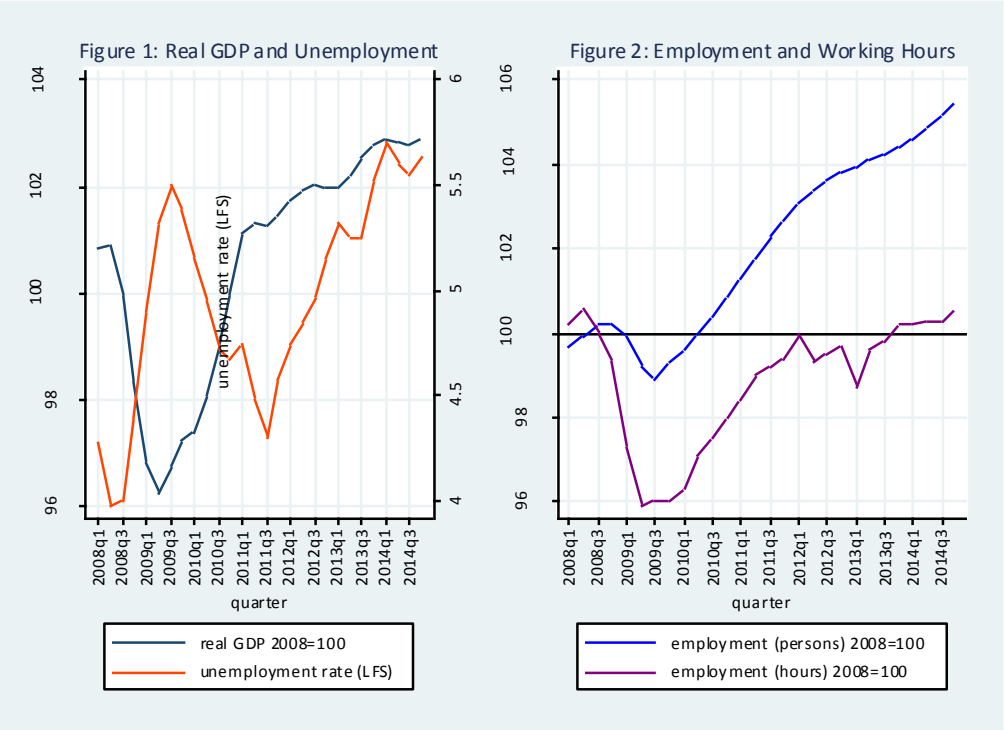
[2] Employment and working time data in figure 2 refer to employees (ESA 2010 seasonally adjusted data).

established short-term working schemes, but for the economy as a whole non-subsidized working time reduction was even more important (Stiglbauer, 2010). The importance of hours reductions as a means of adjustment to negative shocks was also established by the results of the older WDN 1 and 2 surveys (cf. Kwapil 2009a and 2009b).



The reference period was marked by a recovery immediately after the deep recession, followed by period of economic stagnation. Unemployment started to recede quickly from mid-2009 until 2011. Since then, however, unemployment has been on the rise until the end of the reference period.[3] In a similar vein, employment, measured by the number of workers, recovered quickly and has been on an ongoing increase since its trough in mid-2009. However, it took much longer for total working hours to reach the pre-crisis level of 2008: After a relatively stronger increase until 2011, hours' growth was particularly weak.

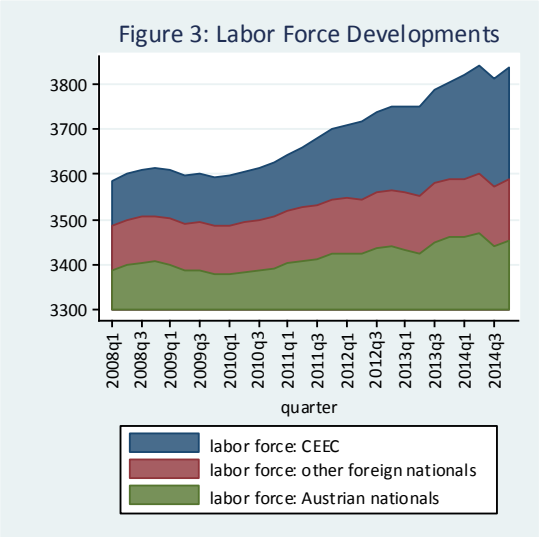
These developments have two main reasons: First, real GDP growth was very low: after a recovery in 2010–2011 average growth was only 0.5 percent in 2012–2013. Together, average growth in the reference period was at disappointing 1.4 percent. Second, the low increase of average working time since 2011 coincides with the trend increase of part-time work, especially of women in service sectors. Third, despite low economic growth, labor force growth was very strong, averaging 1.5 percent[4] in the period between the beginning of 2011 and the end of 2014. This strong increase of the labor force is mainly related to the opening of the Austrian labor market in May 2011 for workers from the so-called EU-8 countries that became EU Member States in May 2004.[5] Since 2011, there has been a strong

[3] In fact, the unemployment rate continued increasing until the third quarter of 2016.

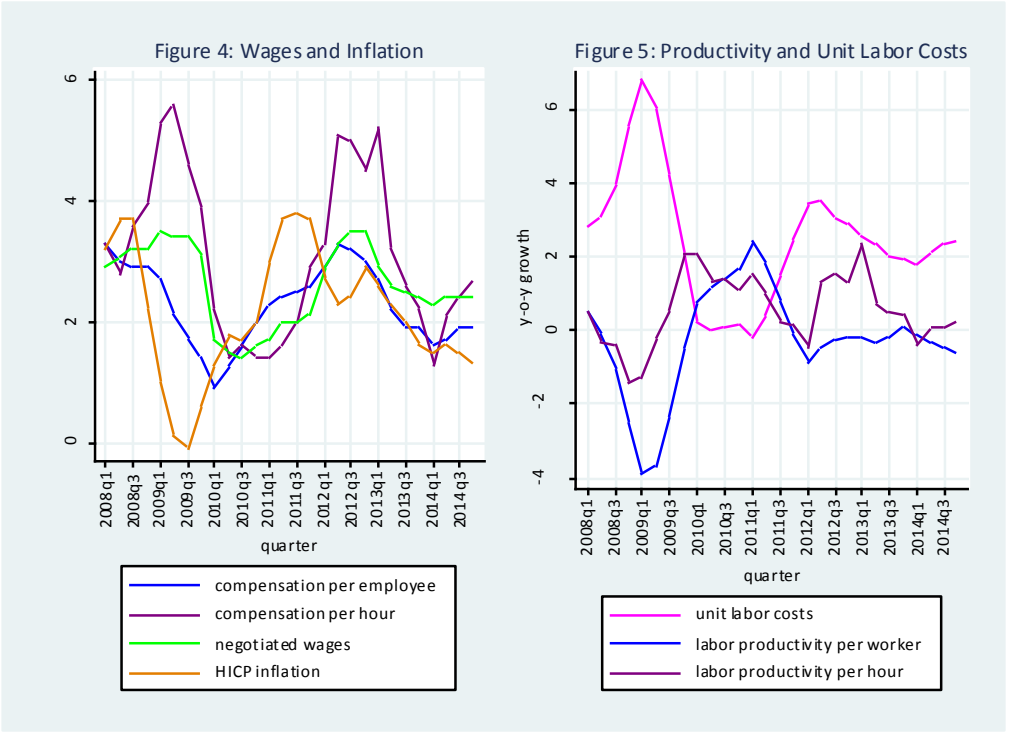
[4] This number and figure 3 are based on administrative data from social security statistics and the public employment service which provide exact employment and unemployment data by citizenship.

[5] Like Germany, Austria reached an agreement, that workers from Hungary, the Czech Republic, Slovakia, Slovenia, Poland, Estonia, Latvia and Lithuania would receive full access to the Austrian labor market only seven years after their accession to the EU. (There was no such exception to full labor mobility for Cyprus and Malta who entered the EU in the same year.)

increase in labor supply from Central and Eastern European Countries (CEEC), while the labor force growth of Austrian nationals and other foreign nationals has been relatively weak (figure 3).



What about wage developments? Figure 4 displays the evolution of average compensation as well as of negotiated wages[6] and HICP inflation. Negotiated wages tend to follow HICP inflation with a lag. For example, after the hike of inflation in 2011 collectively bargained wages grew relatively fast in 2012 where GDP growth has come down substantially (see figure 1). Similarly, hourly compensation exhibited a spike similarly to the period of the Great Recession in this period. Total labor costs were contained to some extent by a halt in the growth of working hours (figure 2). Nevertheless, due to weak productivity developments, unit labor cost growth went up towards the end of 2011 and came down only slowly towards two percent at the end of 2013 (figure 5).



[6] The development of bargained wages is measured by the index of agreed minimum wages ("Tariflohnindex").

1.3 Social Partnership and the Role of Collective Agreements

"Social partnership" (or corporatism) is a strong feature of the Austrian labor market. For both employers and workers, membership to the so-called chambers is compulsory. Austria has the highest employer organization rate in the EU (European Commission, 2015): all employers are organized in the Economic Chambers or in smaller chambers[7] while all workers (except civil servants) are members of the Chambers of Labour. Although social partnership and the established system of collective bargaining are not as undisputed as they were in the past, industrial relations are still regarded as rather consensual, with a strong role for implicit labor contracts, i.e. a tendency of workers to be loyal to firms which in turn try to avoid layoffs in recessions.

In collective bargaining, the employer side is represented by members of the Economic Chambers while on the worker side the Chambers of Labour have ceded the bargaining right to unions. Union density has been on a long-term slow decline: in 2012-2013 it was 27.4 percent (back in 2001 it had been 35.9 percent). Collective agreements are concluded not only for union members, but extended to all workers in the sector. This implies a very high collective bargaining coverage rate by international standards.[8] Every year, some 400 collective agreements are concluded. Collective agreements contain minimum wages for different occupations, combined with (for white-collar workers) various tenure classes which results in virtually thousands of different minimum wage levels. (There is no statutory minimum wage.)

The duration of almost all agreements is twelve months. Most agreements are concluded at the sectoral level (but agreements for single firms do exist), whereby bargaining formally takes place separately for blue-collar and white-collar workers, respectively (though in a closely coordinated manner). Furthermore, collective agreements for different sectors are highly coordinated (Visser, 2016). The mechanism through which coordination is achieved is a system of "pattern bargaining" (or "wage leadership") whereby the export-oriented metal sector starts the collective bargaining round each fall, setting the pace for the subsequent negotiations. That wage settlements of the wage leader do in fact influence settlements in the subsequent negotiations in other sectors is confirmed by empirical evidence (Knell and Stiglbauer, 2012). Wage bargaining institutions appear to be unaffected by the crisis: the indicators for extension regimes and bargaining coverage, the importance of multi-employer-bargaining, and bargaining coordination are all very stable in Austria (Visser, 2016). Only Visser's centralization index points to a slight trend towards decentralization of wage bargaining which has already started in the 1990s.

1.4 Other Institutional Characteristics

The Austrian labor market is characterized by a low degree of dualism. For example, the share of workers in limited duration contracts was around 9.4 percent (almost stable) in the period between 2010 and 2013, considerably lower than the euro-area average (which was around 15.4 percent). Austria also has a rather low share of agency (leasing) workers (2.2 vs. 2.4 percent on average in the euro area in

[7] Employers in the liberal professions have their own, separate chambers.

[8] In international surveys, bargaining coverage in Austria is regularly portrayed as being almost complete. For example, the Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS) database of the Amsterdam Institute for Advanced Labour Studies (which provides the data in European Commission, 2015) reports a coverage rate of 98 percent for the private sector. However, the true coverage rate is probably somewhat lower. A careful analysis of a high number of collective agreements and the number of workers covered indicates that, in the private sector, the corresponding number is rather 94 percent (Bönisch, 2008).

2013).[9] Agency workers also must be paid the same basic wage as if they worked in the firm which they are sent to.

Youth unemployment was comparatively low (9.2 percent in 2013 vs. 24 percent in the euro area as a whole) and so was long-term unemployment (1.2 percent of the labor force in 2013 vs. 6 percent in the euro area). Employment rates were above the euro area average for younger workers (53.9 vs. 30.9 percent in the euro area in 2013) and for workers in prime age (84.0 vs. 75.9 percent). Older workers' employment, on the other hand, was below the average (43.8 vs. 50 percent).

Employment protection is intermediate: The OECD EPL indicator[10] (individual and collective dismissals) for Austria in 2013 was 2.44, being slightly higher than the OECD average (2.29). The EPL index for temporary employment was 2.17 (OECD average 2.08). Unemployment benefit generosity (including unemployment assistance), on the other hand, is relatively high, especially when the high coverage and a longer time perspective are taken into account (see table 11.3 in Boeri and van Ours, 2013). Expenditures for active labor market policies (ALMP) are high as well. For example, in 2011 ALMP expenditures amounted to 0.64 percent of GDP, which is somewhat higher than in the EU on average but considerable when taking into account that with 4.6 percent the unemployment rate was less than half the EU average (9.7 percent). It is also noteworthy that the extent of labor taxation in Austria is one of the highest in the OECD (and a regular concern of international organization such as the European Commission in its country-specific recommendations): in 2013, the tax wedge for an average-income worker was 49.1 percent of total labor costs (it was higher only in Germany and Belgium).[11]

The reference period was, by and large, characterized by stable labor-market institutions. One noteworthy reform that affects this period is the reform of social assistance: the relevant regulations were harmonized, starting with September 2010 (before, different regimes were in place in the federal states of Austria). More importantly, the reform introduced a work requirement for the recipients of social assistance: these have to register with the public employment service and are subject to training and other measures to re-integrate them into the labor market. There were also smaller measures curbing routes to early retirement and ALMP measures aimed at increasing the labor market prospects of younger and older workers).

[9] According to ESA 2010 data. In Austria, agency workers must be paid the same wage as incumbent workers.

[10] Source: http://www.oecd-ilibrary.org/employment/data/employment-protection-legislation_lfs-epl-data-en. All numbers refer to version 3 of the OECD EPL indicator set.

[11] See OECD (2016).

2 The Survey

2.1 Some Basic Information on the WDN 3 Survey

The harmonized WDN 3 questionnaire ("the template" from now on) was adapted for the survey in Austria with the help of the Austrian Institute for Economic Research (WIFO). Like in WDN 1 and 2, WIFO sent the survey to firms which are used to answering regular questionnaires (such as WIFO's "Konjunkturtest" but also ad hoc surveys). It took place in the period from fall 2014 to February 2015: The first wave of the questionnaire was sent to firms at the end of September 2014. Subsequently, there were two reminders in November 2014 and in January 2015. Regarding the range of questions, the Austrian questionnaire included only the core period (2010–2013) and only core questions. There is one exception to this: section D[12] contained two questions (no. 47 and 48) on possible cuts of performance-related pay. (An English translation of the Austrian questionnaire can be found in appendix 3.)

By and large, the Austrian questionnaire maintained the structure of the survey template. There were, however, exceptions to this. Following the advice of WIFO, some questions were broken down into simpler subquestions) and filter questions were introduced in some cases to simplify the questionnaire. (See appendix 2 for more details concerning deviations from the template.)

The gross sample amounted to 4,000 firms with at least five employees in pre-selected sectors.[13] Firms received the questionnaire via mail. In answering, they could choose between sending the answers on paper or via an online version of the questionnaire. Altogether, 784 (or 19.6 percent) firms returned the filled-in questionnaire (557 sent the answers via mail, fax or email; 227 used the online version).

2.2 Firm and Worker Characteristics

Table 1 gives an overview of the main firm characteristics. The sector is given by the sampling register while age and size are based on survey results. As can be seen, the firms in the sample are quite old (more than 40 percent are older than 50 years) and are relatively large; many belong to the manufacturing and the business services sector.

Table 1: Firm Characteristics (Percentage Shares)

Firm age				
less than 10 years	10 to less than 20 years	20 to less than 50 years	50 to less than 100	more than 100 years
6.4	15.2	38.1	25.3	15.1
Sector				
Manufacturing	Construction	Trade	Business services	Financial intermediation
29.1	10.8	22.1	32.4	5.6
Firm size				
Less than 5 employees	5-19 employees	20-49 employees	50-199 employees	200 employees or more
0.5	17.9	21.4	32.1	28.1

Unweighted results.

Table 2 shows the size distribution of firms in the broad sectors. Apart from a small number in business services, there are no firms with fewer than five employees. The majority of firms belong in the higher

[12] All question numbers in this report refer to the Austrian version of the WDN questionnaire unless indicated otherwise.

[13] The five broad sectors in the harmonized data set are manufacturing (NACE rev. 2 sections 10–33), construction (sections 41–43), trade (sections 45–47), business services (sections 49–82, except sections 64–66) and financial services (sections 64–66).

size classes: 32 percent of all firms have between 50 and 199 employees while 28 percent of all firms have 200 or more workers. Larger firms dominate in manufacturing but also in financial intermediation.

Table 2: Firm Characteristics: Sector and Size (Percentages)

	firm size					
Sectoral breakdown	Less than 5 employee	5-19 employees	20-49 employees	50-199 employees	200 employees or more	Total
Manufacturing	0.0	2.6	4.1	10.1	12.4	29.1
Construction	0.0	2.3	2.7	4.3	1.5	10.8
Trade	0.0	5.1	5.4	7.1	4.5	22.1
Business services	0.5	7.5	9.1	9.1	6.3	32.4
Financial intermediation	0.0	0.4	0.3	1.5	3.4	5.6
Total	0.5	17.9	21.4	32.1	28.1	100.0

Unweighted results.

52.2 percent of firms consisted of a single establishment (the rest being multi-establishment firms). Table 3 indicates that most firms (more than 83 percent) were mainly domestically owned while almost 17 percent were under foreign ownership. As regards autonomy, 8 percent of the firms were a parent company while 31 percent were subsidiaries or affiliates of other firms (almost all foreign-owned firms fall into this category).

Table 3: Firm Characteristics: Autonomy and Ownership (Percentages)

	Autonomy of the firm			
Ownership of the firm	Parent company	Subsidiary	Does not apply	Total
Mainly domestic	8.1	15.5	59.8	83.4
Mainly foreign	0.3	15.6	0.8	16.6
Total	8.3	31.1	60.6	100.0

Unweighted results.

Table 4 shows the composition of the workforce in firms along some key worker characteristics. Almost 75 percent of all workers had open-ended full-time contracts, while 18 percent were in open-ended part-time jobs. 7.1 percent had temporary or fixed-term contracts. More than 55 percent of the workers in the firms were manual workers (the two groups of higher and lower-skilled manual workers are almost of equal size), about 31 percent were lower-skilled non-manual workers and 14 percent higher-skilled non-manual. Not shown in the table is the significance of agency workers. The average ratio of agency workers over the number of employees was less than 6 percent. Agency workers were, however, only present only in 34 percent of all firms.

Table 4: Worker Characteristics (Percentages)

Contract types			
Permanent full-time	Permanent part-time	Temporary or fixed term	
74.6	18.3	7.1	
Occupational groups			
Higher-skilled non-manual	Lower-skilled non-manual	Higher-skilled manual	Lower-skilled manual
14.0	30.8	27.3	27.9
Tenure class			
Below 1 year	Between 1 and 5 years	More than 5 years	
14.6	27.1	58.3	

Weighted results (employment-adjusted sampling weights). The occupational classfications are as follows: higher skilled non-manual (ISCO 08 groups 1, 2, 3), lower skilled non-manual (ISCO 4 and 5), higher skilled manual (ISCO 7 and 8), lower-skilled manual (ISCO 9).

3 Main Results on Changes in the Economic Environment and the Adjustment of Employment and Wages

In this section, the main results of the questionnaire are presented. They refer to the reference period of 2010–2013 for which all participating countries asked the respective questions. Typically, from now on, weighted results are reported. In most cases, the weights used are basic sampling weights (i.e. firm weights). However, later in the text (in sections 4 and 5), employment-weighed results are provided as well as results might sometimes be sensitive to the kind of weighting scheme used. Following the structure of the survey template, subsection 3.1 deals with the sources and the size of shocks (survey section B "Changes in the Economic Environment"). Subsection 3.2. is devoted to labor force adjustments (survey section C "Labor Force Adjustments"), and 3.3 presents the results on wage formation and adjustment (survey section D "Flexibility of Wages and Salaries"). The focus in this section is on aggregate results; firm heterogeneity is briefly discussed in a qualitative way. More detailed disaggregated results by sectors, size and age categories etc. are reported in appendix1

3.1 Sources and Size of Shocks

3.1.1 Aggregate Results

In section B of the questionnaire, firms were asked about changes in the economic environment in 2010–2013. The first question set was about the size and direction of several types of shocks. Table 5 displays the aggregate results. Firms' experiences were quite heterogeneous. Almost 7 percent of firms were affected by strong demand decreases, while almost 25 percent of firms exhibited moderate demand increases. More than 40 percent of all firms found that volatility or the uncertainty of demand was increasing slightly or even strongly. As regards financing conditions, more than 17 percent perceived moderately or strongly negative shocks. More than 36 percent of the firms found that their customers' ability to pay was deteriorating at least moderately whereas more than 80 percent reported that their availability of supplies was unchanged.

In addition, firms were asked about the persistence of "strong" (positive or negative) shocks. In the case of demand shocks and shocks to the volatility of demand some 68 percent responded that they considered these shocks as "long-lasting" (results not shown). A further set of questions was directed at possible credit shortages that firms faced.[14] For working capital, new investment and for refinancing debt, Austrian firms were asked whether credit was not available at all or whether credit conditions were too onerous. On all of these questions 93 percent or more of the firms responded that the availability of credit was "not relevant" in the period under consideration. These results are in line with other surveys indicating that credit constraints were a minor problem in the reference period in Austria.[15]

[14] Note that the structure of these questions was different from the common template (see appendix 2).

[15] According to a regular survey on credit conditions in Austrian firms (OeNB, 2015), the share of firms indicating that their credit requests were either "unrealistic" or rejected by the bank, or that credit conditions were "unacceptable" was fluctuating between 20 and less than 30 percent in the period from 2011 to 2014. Taking into account that only 20 percent of all firms had actually applied for a credit yields that for the vast majority of firms the availability of bank credit was not a problem in that period.

Table 5: Shocks to Firms 2010-2013 (Percentages)

	Direction of shocks					
	Strong decrease	Moderate decrease	Unchanged	Moderate increase	Strong increase	*Total negative shocks* [1)]
Level of demand	6.8	24.7	23.9	34.0	10.5	*31.6*
Volatility / uncertainty of demand	3.0	9.6	47.2	26.1	14.1	*40.2*
Access to external financing	6.6	10.6	73.8	7.4	1.6	*17.2*
Customer's ability to pay	5.5	29.9	58.1	5.7	0.7	*35.5*
Availability of supplies	1.0	10.2	81.1	6.6	1.1	*11.2*

Weighted results (basic sampling weights). [1)] "Moderate" + "strong" increases of volatility / uncertainty of demand; "moderate" + "strong" decreases otherwise.

Moreover, firms reported the direction of changes in their main cost components in the reference period (table 6). With the exception of financing costs where cost changes were rather symmetric, most firms perceived costs to have increased rather than decreased. In the case of labor costs, 29 percent reported a "strong increase".

Table 6: Evolvement of Total Cost Components (Percentages)

	Strong decrease	Moderate decrease	Unchanged	Moderate increase	Strong increase	*Increase total*
Total costs	0.9	7.7	11.2	69.2	11.0	*80.2*
Labor costs	0.8	5.5	5.7	58.8	29.1	*88.0*
Financing costs	5.0	24.1	44.1	21.6	5.2	*26.9*
Cost of supplies	0.9	6.7	28.1	55.5	8.8	*64.4*

Weighted results (basic sampling weights).

Firms also indicated changes for a number of components of labor costs. The results are shown in table 7: Very few firms experienced a decrease in base wages. On the other hand, more than 90 percent reported that base wages had increased (19 percent even reported that the increase was "strong"). Flexible wage components (such as bonus payments, fringe benefits etc.) were perceived as unchanged by 48 percent of firms while 41 percent found that there was a moderate increase. As regards the number of permanent employees, more firms reported moderate (39 percent) or strong (6 percent) increases rather than moderate or strong decreases while 30 percent said that employment of permanent staff was unchanged.

Table 7: Changes in Components of Labor Costs (Percentages)

	Strong decrease	Moderate decrease	Unchanged	Moderate increase	Strong increase	*Increase total*
Base wages	0.7	1.5	7.1	71.4	19.3	*90.7*
Flexible wage components (bonuses etc.)	1.3	3.5	48.0	40.8	6.4	*47.2*
No. of permanents employees	2.6	17.5	30.2	38.7	11.0	*49.6*
No. of temporary / fixed-term employees	3.2	8.7	59.7	20.7	7.7	*28.4*
No. of agency workers and others (freelancers etc.)	1.8	6.8	74.3	14.0	3.1	*17.1*
Working hours per employee	1.1	10.0	44.6	35.2	9.1	*44.2*

Weighted results (basic sampling weights).

Almost 60 percent reported that there was no change in the number of temporary or fixed-term employees. Here too, increases occurred more often than decreases. The same holds for agency workers and others, such as freelance workers (which probably play a small role). Finally, working hours per employee were stable for almost 45 percent of firms, but slightly (35 percent) or strongly increasing (9 percent) in others while decreases occurred comparatively rarely.

Further questions, of which the results are displayed in table 8, were aimed at learning how the demand or the price of the main product (or service) was affected in the reference period. On balance, the

majority of firms experienced moderately positive demand or price shocks both in home and foreign (if applicable) markets. However, on average, about five percent of firms reported experiencing strong negative demand or price shocks in domestic and foreign markets, respectively.

Table 8: Changes in Demand or Price for / of the Main Product or Service (Percentages)

	Strong decrease	Moderate decrease	Unchanged	Moderate increase	Strong increase	*Total negative shocks* [1)]
Domestic demand	5.9	23.6	27.0	36.0	7.5	*29.5*
Foreign demand	5.1	16.1	42.4	28.9	7.5	*21.2*
Prices in domestic market	5.4	20.5	25.1	45.6	3.4	*49.0*
Prices in foreign market	4.9	17.2	42.8	33.6	1.5	*35.1*

Weighted results (basic sampling weights). [1)] "Moderate" + "strong" decreases of domestic and foreign demand, respectively; "moderate" + "strong" increases otherwise.

3.1.2 Firm Heterogeneity

The appendix contains a detailed table (table A1.1) with descriptive results on the questions in questionnaire section B, broken down by broad sectors and size classes and other firm characteristics. Question set 5 was dealing with factors affecting the firm's activity during the reference period. As mentioned, negative demand shocks affected almost 32 percent of all firms. Firms in construction and trade experienced negative demand shocks more often than firms in the other sectors. Demand decreases were also stronger in smaller firms. The volatility (uncertainty) of demand, on the other hand, was highest in manufacturing (and larger firms). The access to external financing was more balanced; when it decreased, this was especially the case in the construction sector and also in smaller firms. Customer's ability to pay sank especially in the construction sector.

The persistence of demand shocks (question set 6) was strongest in banking while the persistence of demand volatility was rather evenly distributed across sectors. Credit constraints (questions 7–21) played a larger role in construction, business services and trade (and also in small and medium-sized firms, as far as credits for working capital and new investment were concerned). All financial intermediation firms indicated that the credit constraints asked in questions 7–21 were not relevant. This is in contrast to their answers to question 5c where almost 19 percent of these firms indicated that they had experienced decreases in their "access to external financing").

Cost increases in general (question set 22) and increases of labor costs in particular were most often reported by business services. Financing costs increased strongest in construction and smaller firms (confirming the results of the related questions 5 and 7–21). Finally, in the results on the availability of supplies, there is much heterogeneity by sectors and size.

Question set 23 was asking for the evolution of components of labor cost components in the reference period. Base wages increased strongest in business services and manufacturing. Flexible wage components, on the other hand, increased more often in trade and business services. The lowest frequency of increases was reported by banking firms. Finally, as regards question set 24 (on domestic vs. foreign shocks), negative domestic demand shocks were most common in trade and financial intermediation while negative foreign demand shocks (if applicable) were most common in financial intermediation and business services. Business service firms exhibited relatively more often domestic price increases, while foreign price increases affected trade firms more strongly than other sectors.

3.2 Labor Force Adjustment

The opening questions of section C (questions 25-28) asked firms about the number of employees and about employee characteristics. Adopting basic sampling weights, the average number of employees in

each firm was 232.8 employees (the median size being 50 employees). These results demonstrate that larger firms are overrepresented in the sample. (For employee characteristics see table 4).

3.2.1 Aggregate Results

Firms were asked whether they had to reduce their labor input in the reference period significantly. 18.5 percent of firms responded affirmatively. In a subsequent question set, these firms could indicate whether they used one of various adjustment channels of labor demand. Table 9 shows the corresponding results. The most frequent adjustment methods were (1) Freezes and reductions of new hires (almost 48 percent indicated that they used this way of adjustment "moderately" or "strongly"), (2) individually layoffs (26 percent), (3) the reduction of agency workers and others (22 percent), and (4) non-subsidized working-time reductions of working time (22 percent). While there was some role for temporary layoffs (17 percent) and collective layoffs (16 percent), early retirement, the non-renewal of temporary contracts and the subsidized reduction of working time (short-term work) were relatively unimportant in the reference period.

Table 9: Adjustment Channels of Labor Demand (Percentages)

	Not at all	Marginally	Moderately	Strongly	*"Moderately" + "strongly"*
Collective layoffs	72.0	11.6	13.8	2.6	*16.4*
Individual layoffs	29.8	44.7	21.3	4.2	*25.5*
Temporary layoffs	63.3	20.2	11.4	5.2	*16.6*
Subsidized reduction of working time	91.3	2.5	4.4	1.9	*6.3*
Non-subsidized reduction of working time	43.8	34.7	13.9	7.6	*21.5*
Non-renewal of temporary contracts	79.5	15.9	3.6	1.1	*4.7*
Early retirement	88.9	9.2	1.9	0.0	*2.0*
Freeze or reduction of new hires	27.2	25.2	27.6	20.0	*47.6*
Reduction of agency workers and others	64.6	13.6	12.4	9.5	*21.8*

Weighted results (basic sampling weights).

A related question was on whether a set of adjustment tools have become more difficult or not (table 10). About 36 percent of the firms reported that adjusting working hours has become "more" or "much more difficult". 35 percent of the firms reported that adjusting wages of incumbent workers has become "more" or "much more difficult". An even higher number, more than 40 percent, reported that a reduction of wages for new hires has become "more difficult" or "much more difficult".

The overall impression from the results in table 10 is that the adjustment of the labor input at the time of the survey (and also of wages) has become more difficult than in 2010. This is somewhat puzzling since there were no significant legal changes that would justify such a response. A possible explanation for these results is that firms' perceptions are biased towards a deterioration of the institutional framework they are operating in.[16]

[16] That firms perceived adjusting employment and wages as more difficult than in 2010 is not confined to Austria. This holds for a majority of countries. According to the harmonized WDN dataset for all participating countries, only in some countries (most notably the countries that were most heavily affected by the crises following the Great Recession) did the majority of firms answer that laying off workers etc. had become easier.

Table 10: Has … Become More or Less Difficult? (Percentages)

	Much less difficult	Less difficult	Unchanged	More difficult	Much more difficult	*"more difficult" + "much more difficult"*
Collective layoffs for economic reasons	0.4	2.4	76.3	12.2	8.7	*20.9*
Individual layoffs for economic reasons	1.0	2.8	75.0	16.4	4.8	*21.2*
Individual layoffs for disciplinary reasons	0.4	1.1	73.1	15.0	10.4	*25.4*
Temporary layoffs for economic reasons	0.5	6.8	81.4	8.7	2.6	*11.3*
To hire new employees	0.0	2.9	72.2	23.3	1.5	*24.8*
To adjust working hours	0.2	15.4	48.7	25.7	10.0	*35.7*
To move employees to other locations	0.0	6.2	73.3	14.0	6.5	*20.4*
To move employees to different job positions	0.4	9.2	67.3	17.1	6.1	*23.2*
To adjust wages of incumbent employees	0.0	3.2	62.2	21.6	13.0	*34.6*
To lower wages for new hires	0.2	6.6	53.0	21.7	18.5	*40.3*

Weighted results (basic sampling weights).

Finally, firms could indicate possible obstacles in hiring workers in permanent, open-ended contracts.[17] The results are shown in Table 11. The three highest obstacles were (1) an insufficient availability of labor with the required skills (30 percent "relevant" or "very relevant" whereby the share of "very relevant" was almost 22 percent), (2) high payroll taxes (27 percent) and high wages (24 percent).

Table 11: How Relevant is Each of the Following Factors as an Obstacle in Hiring? (Percentages)

	Not relevant	Of little relevance	Relevant	Very relevant	*"Relevant" + "very relevant"*
Uncertainty about economic conditions	70.9	10.2	11.3	7.6	*18.9*
Insufficient availability of labor with required skills	67.6	2.4	8.1	21.8	*30.0*
Access to finance	82.6	10.5	5.7	1.2	*6.9*
Firing costs	74.1	9.6	10.6	5.7	*16.3*
Hiring costs	76.6	12.5	7.6	3.3	*10.9*
High payroll taxes	68.9	4.3	12.6	14.3	*26.8*
High wages	68.7	7.2	13.7	10.4	*24.0*
Risks that labor laws are changed	72.7	13.8	9.0	4.5	*13.5*
Costs of other inputs complementary to labor	78.5	13.9	6.2	1.4	*7.6*

Weighted results (basic sampling weights).

3.2.2 Firm Heterogeneity

A detailed breakdown of results, broken down by sectors, size categories, age, etc. can be found in table A1.2 in the appendix. As before, we concentrate mainly on sectoral differences. Average firm size differed across sectors and was highest in banking and lowest in construction. The share of permanent full-time employees was highest in manufacturing and in larger firms, but lowest in business services and financial intermediation. Leasing workers were more prevalent in business services while they barely played a role in banking. The share of higher-skilled non-manual workers was highest in banking and in business services. While banking had a high share of workers with high tenure (five years or more) the corresponding share in business services was lowest.

The need to reduce labor input or alter its composition (question 29) was highest in manufacturing and – somewhat surprisingly – lowest in banking. Turning to the measures of how to accomplish such a reduction, the answers reveal that collective layoffs and also temporary layoffs were most common in construction. Individual layoffs, on the other hand, were much more common in business services. Subsidized reductions of working time were only relevant in manufacturing and business services but

[17] In contrast to the template these questions were preceded by a filter question in the Austrian questionnaire which may have influenced the results (see appendix 2).

played no role in the other sectors. Non-subsidized reductions of working hours, on the other hand, were important in all sectors (though to a lesser extent in trade). Non-renewal of temporary contracts and early retirement were rarely used in all sectors. Freezes and reductions of new hires, on the other hand, were the most important adjustment mechanism in all sectors alike. The share of firms using this instrument was almost 89 percent in banking – a sector that is severely under pressure to reduce employment capacity.

Question set 31 asked firms whether these adjustment measures have become more difficult compared to 2010. Especially construction firms found it more difficult to lay off workers (collectively and individually). Firms in all sectors also found it hard to adjust working hours (with the notable exception of banking). Financial services stand out as a sector where it apparently was easier to move employees to other jobs and also to adjust the wages of incumbent workers.[18] Business service firms, on the other hand, found it more difficult to lower the wages of new employees. Finally, in question set 33 (obstacles for new hires into open-ended contracts), the most important reason was the insufficient availability of labor with the required skills. This answer was given particularly often by firms in business services and manufacturing. Firing costs were relatively more important in manufacturing and business services. High payroll taxes were the second-most important factor; this was indicated especially by manufacturing and business service firms.

3.3 Changes in Wage Setting

3.3.1 Aggregate Results

The final section of the questionnaire was on wage setting. Labor costs amounted to 41.1 percent of all costs on average. 4.1 percent of labor costs were performance-related. Firms were asked (question 36) whether there existed a collective agreement at the firm level or outside the firm. Taking these answers together yields a share of 96 percent of firms (employment-weighted 99 percent) for which such an agreement (either outside the firm or at the firm level) exists. This confirms that bargaining coverage is very high in Austria.[19]

When asked about the frequency of adjustment of collective agreements, the overwhelming majority of firms (79 percent) responded "once a year". The respective shares of the different frequencies in this question were very similar to the other questions asking for the frequency of changes in base wages (in the reference period and before 2010): for 80.6 percent of all the firms the frequency of base-wage changes in the reference year was identical to the frequency indicated for changes of collective agreements. Another question was related to whether base wages were adapted to changes in inflation (in the reference period and before 2010). Although there is no automatic legal indexation of wages to inflation, 32 percent of firms gave positive answers, possibly interpreting the regular adjustments of collective agreements as an indexation mechanism.[20]

[18] These results are consistent with the evidence provided by Ritzberger-Grünwald et al. (2016) for the Austrian banking sector, which is under pressure to cut labor costs but has so far avoided larger-scale layoffs.

[19] However, when firms were asked how many of their employees were covered by any type of collective agreement (question 37) the average share indicated by firms was merely 68 percent (employment-weighted 80 percent). As mentioned in section 1.3, the actual coverage ratio is certainly higher. Presumably, a number of firms misunderstood the question and confused coverage by a collective agreement on the one hand and that the actual pay level equaled the minimum pay level set out by the collective agreement on the other hand.

[20] Collective bargaining is not an indexation mechanism in the sense of automatically adjusting nominal wages to inflation. However, it can be seen as a quasi-ex-post indexation mechanism, given that unions at least want to preserve real wages. In actual collective bargaining in Austria, at the beginning of the bargaining process in a

Finally, the questionnaire dealt with wage freezes and wage cuts (see table 12). Freezes of base wages, even for just a fraction of their workers, occurred rarely: merely five percent of all firms reported that they had frozen wages at least once in the reference period. (In the single years, this share was between three and four percent.) The question on the share of workers affected yielded an (unconditional) average between one and four percent per year. Cuts of base wages occurred even more rarely: only about one percent of all firms cut base wages in the reference period (for at least a fraction of workers). Combining the results on both freezes and cuts of base wages, yields that only six percent of the firms applied at least one of the two instruments at least once in the reference period.

In addition to the core questions, the Austrian questionnaire contained questions on possible cuts in performance-related pay (such as bonus payments and other "flexible" components of total pay). Cuts in performance-related pay occurred considerably more often than cuts in base wages: 12 percent of all firms did so at least once in the reference period. Looking at the results for single years reveals that such cuts were more frequent towards the end of that period than at the beginning of it.

Table 12: Freezes and Cuts of Base Wages, Cuts in Performance-Related Pay (Percentages)

Freezes of base wages	Not applicable	Applicable
Wages were frozen at least once during 2010-2013	95.0	5.0
	No	Yes
Wages were frozen in 2010	96.7	3.3
Wages were frozen in 2011	96.2	3.8
Wages were frozen in 2012	96.1	3.9
Wages were frozen in 2013	96.1	3.9
Cuts of base wages	Not applicable	Applicable
Wages were cut at least once during 2010-2013	98.7	1.3
	No	Yes
Wages were cut in 2010	99.1	0.9
Wages were cut in 2011	99.0	1.0
Wages were cut in 2012	99.0	1.0
Wages were cut in 2013	98.8	1.2
Cuts *or* freezes of base wages	Not applicable	Applicable
Wages were *neither* frozen *nor* cut in 2010-2013	5.9	94.1
Cuts of performance-related pay	Not applicable	Applicable
Performance-related pay was cut at least once during 2010-2013	87.8	12.2
	No	Yes
Performance-related pay was cut in 2010	96.4	3.6
Performance-related pay was cut in 2011	93.7	6.3
Performance-related pay was cut in 2012	92.4	7.6
Performance-related pay was cut in 2013	90.7	9.3

Weighted results (basic sampling weights).

particular sector, there is an agreement on "the" inflation rate (i.e. CPI changes over the past twelve months). Regularly, this is implicitly understood as the minimum wage increase that is beyond dispute.

3.3.2 Firm Heterogeneity

Like for the previous sections, there is a table with detailed results on wage setting, broken down by sector, size and classes etc. in the appendix (table A1.3). The share of labor costs in total costs ranged from 33 percent in manufacturing to 53 percent in financial intermediation. Performance-related pay was more common in services, especially in trade and financial intermediation where it amounted to about 5 percent of labor costs. According to the answers on question 36, bargaining coverage (collective agreement applicable either at firm level or outside the firm) was highest in banking, manufacturing and construction. As mentioned before, the question asking how many employees were covered gives considerably lower results, but the sectoral ordering of bargaining coverage remains unaffected. Also, small firms up to 19 employees had lower bargaining coverage than medium-sized firms while for firms with 200 employees and more in the sample coverage was complete.

Almost 90 percent of manufacturing firms and almost 88 percent of firms in financial intermediation have their collective bargaining wages typically changed once a year (question 38). In the other sectors, this share is between 75 and 80 percent. On questions 41 and 42, where firms reported the frequency with which base wages were changed in the reference period (and before 2010), the results were similar to those for question 38. However, in trade and banking there were discrepancies (in the former sector the share of "once a year" changes of base wages was higher than the corresponding share of changes of collective agreements; in the latter, the opposite could be observed).

Finally, the number of base wages freezes and cuts reported was very small. If any, wage freezes (but not cuts) played a larger role in business services than in the other sectors. Wage cuts, though even rarer, could mainly be observed in manufacturing and trade. Cuts of performance-related pay were relatively evenly distributed across sectors, with the exception of financial services: here, the share of firms reporting that they enacted such cuts at least once within the reference period was 24 percent. This is in line with the aforementioned cost pressure in the banking sector.

4 Shocks and Firms' Reactions

In exploring the data a bit further, this section investigates whether there is a connection between the various types of shocks a firm might have been faced with and various possible reactions like adjusting the labor input or wages. First, a definition of the shock variables employed is necessary.

4.1 Shock Variables

There are two major types of shocks that can be identified through the answers to the questions in section B of the WDN 3 questionnaire: (i) demand shocks and (ii) financial or credit shocks.[21] Demand shocks can be inferred from the answers to questions 5a (changes in the level in demand), 5b (changes in the volatility of demand) and 24a or b (changes in the demand for the main product in the domestic and foreign markets, respectively).

To analyze negative demand shocks, several dummy variables are created. For example, for question 5a, the respective dummy is set to 1 if there was either a moderate or a strong decrease. While the indicator based on question 5b is hardly related to the other potential demand shock variables, the answers to 5a and 24ab (either on 24a or 24b or both) are correlated in a highly significant way: the weighted correlation coefficient between the demand shock based on 5a and 24ab is 0.59 (being highly statistically significant). Table 13 shows a cross tabulation of both dummy variables.

Table 13: The Two Main Demand Shock Indicators Compared (Frequencies)

	Negative domestic or foreign demand shock dummy (based on qu. 24a and b)			
Negative demand shock dummy (based on qu. 5a)	0	1	missing	total
0	423	93	11	527
1	58	184	9	251
missing	1	2	3	6
total	482	279	23	784

Unweighted results.

Based on these two indicators, three demand shock variables are defined: (i) a "normal" definition (based solely on 5a), (ii) a "broad" definition (here the dummy takes on the value of 1 if at least one of the two indicators points to a demand shock) and, finally, (iii) a "narrow" definition (1 when both demand shock indicators are equal to 1).

The definition of financial (or credit) shocks is made in a similar way. There are several candidates for financial shocks indicators. First, there is the answer to question 5c (access to external financing). As in the case of demand shocks, the dummy which is based on it will serve as the "normal" definition of financial shocks. A second indicator is constructed from the answers to questions 7–21.[22] This indicator is set to 1 if any one of the answers to questions yielded a "relevant" or "very relevant" credit shock. The "broad" definition of financial shocks is applicable when either the first or the second indicator

[21] A third kind of shocks could also be introduced, e.g. based on question 5e (availability of supplies). Other candidates for cost shock variables are those based on the answers to questions 22a (total costs), 22b (labor costs), 22d (costs of supplies), and 22e (other costs). Further variables could be constructed from question set 24 (demand and price increases in domestic and foreign markets, respectively; cost shocks could potentially be identified when the price increases while demand remains constant or decreases). However, these potential cost shock variables are very weakly correlated with each other. Therefore, this kind of shock is disregarded.

[22] The variable based on question 22c (evolution of financing costs) was also considered but it was found to be only weakly related to the two indicators that were finally chosen.

points towards such a shock. The "narrow" definition of financial shocks, in turn, covers only those cases when both indicators are equal to one.

The correlation between the two indicators is 0.39 (also highly statistically significant). Table 14 shows a cross-tabulation. It reveals that there are considerably more shocks according to the first than the second indicator. The "overlap" between both indicators is relatively small. This implies that there is a considerable difference between the "broad" and the "narrow" definition of financial shocks.

Table 14: The Two Main Financial Shock Indicators Compared (Frequencies)

	Negative financial shock dummy (based on questions 7-21)			
Negative financial shock dummy (based on qu. 5c)	0	1	missing	total
0	608	22	3	633
1	92	39	0	131
missing	19	0	1	20
total	719	61	4	784

Unweighted results.

Table 15 displays summary statistics of demand and credit shock dummies according to the various definitions. The relative frequencies vary considerably: while 24 percent of all firms exhibited a demand shock in the reference period according to the "narrow" definition, 42 percent were affected by demand shocks according to the "broad" definition. For credit shocks, the difference between the "narrow" definition and the "broad" definition is even more pronounced (6 and 21 percent, respectively). The breakdowns by sectors and size classes which are also shown reveal relatively little variation in the means of the shock variables. Two things appear noticeable: (i) Credit shocks played a higher role in construction than in the other sectors. (ii) According to the "narrow" definition (and only according to this)[23] there were no credit shocks in financial intermediation.

Both demand and credit shocks are significantly correlated with affirmative answers to question 29 (whether firms had to adjust employment at least once in the reference period); the correlation is around 0.24 for demand and around 0.17 for credit shocks, respectively (depending on the definitions of shocks).

4.2 Firms' Reactions to Shocks

Turning to firm's reactions, a number of dummies are used to indicate various ways how firms reduce (or change) labor input or wage costs. The answers to question set 30 (see table 9) offer nine possible reactions regarding the input of labor (conditional on question 29). In answering these questions, firms could tick more than one possible reaction. A further possibility to react is based on questions 43 and 45: the indicator "wage cut or freeze" is set to one if there was at least one occurrence of a wage cut or wage freeze in the reference period. Finally, the question on cuts in performance-related pay offers yet another possible firm reaction.

[23] See also section 3.1.2 and table A1.1, respectively.

Table 15: Summary Statistics of Shock Variables (Relative Frequencies)

	demand shock			credit shock		
	"normal" def.	"narrow" def.	"broad" def.	"normal" def.	"narrow" def.	"broad" def.
Overall mean	0.316	0.235	0.422	0.172	0.058	0.205
Obs	778	758	780	764	761	764
Manufacturing	0.314	0.246	0.417	0.153	0.044	0.191
Construction	0.345	0.226	0.435	0.252	0.127	0.269
Trade	0.355	0.260	0.475	0.129	0.031	0.167
Business services	0.281	0.219	0.385	0.175	0.057	0.211
Financial intermediation	0.337	0.245	0.473	0.186	0	0.186
5-19 employees	0.356	0.249	0.430	0.186	0.086	0.211
20-49 employees	0.304	0.240	0.397	0.216	0.065	0.242
50-199 employees	0.329	0.229	0.425	0.159	0.047	0.218
200 employees and more	0.266	0.222	0.440	0.122	0.034	0.136

Weighted results (basic sampling weights).

Table 16 displays how the means of the reaction variables (firms' adjustment channels) are statistically related to demand and credit shocks. One can only assume that firms' reactions and the shock variables are related in a causal way; in both cases we only know that firms (i) exhibited such shocks in the reference period and that they used one or more possible reaction channels at least once during the same period. The first row of the table shows the means of the firms' reaction dummies. Note that these are all unconditional means (the shares shown in tables 9 and A1.2 are conditional on the filter question 29). It should be noted that the relative frequencies of the various reaction channels vary considerably: cuts of performance-related pay occurred most often (12 percent), followed by freezes or reductions of new hires (almost 9 percent), while early retirement (0.3 percent) and a non-renewal of temporary contracts (0.8 percent) were hardly used.

The remainder of the table shows how the reactions of firms vary when there are demand and financial shocks (for each of these, the "normal", "narrow" and "broad" definitions are shown, t tests are used in order to see whether firm's reactions to demand or financial shocks are different compared to a situation when such shocks are absent. (Asterisks are attached to the respective pairs of means when the differences are statistically significant.) The upper half displays the results for demand shocks while the lower half displays those for financial shocks. As the results for both types of shocks are very similar, they can be summarized as follows: when a demand or financial shock occurs, firms most often resort to reductions or freezes of new hires. There is also a robust correlation of shocks with layoffs (mainly individual, but also collective or temporary layoffs). Moreover, there is some evidence that firms reduce working hours (without subsidies). In the case of demand shocks, there is also a robust tendency towards a reduction of agency workers. There is only weak evidence that firms used early retirement or wage cuts / freezes in the presence of shocks. Finally, the subsidized reduction of working hours was rarely used[24] and there appears to be no connection to the shocks.

In the next step, similar in spirit to an exercise in the paper by Izquierdo, Jimeno, Kosma, Lamo, Millard, Rõõm and Viviano (2017), a set of probit regressions is estimated whereby the dependent variables are the eleven reaction variables presented in table 16. Explanatory variables are demand and financial shocks, respectively. Shock variables are employed in their "normal", "narrow" and "broad" definitions.

[24] It should be kept in mind that the reference period does not cover the Great Recession where subsidized reductions of working time was used quite intensively (especially in industry).

In addition, regressions are performed unweighted, with the basic sampling weights and employment weights. This yields 11*3*3 = 99 regressions. Regression specifications also include sector and size dummies. It should be noted that demand and credit shocks are correlated: the pairwise correlation coefficients are 0.13, 0.11 and 0.14 (with p values smaller than 0.01) for the "normal", "narrow" and "broad" definitions, respectively. The regression results are reported as marginal effects in table 17.

Table 16: Firm Reactions by Types of Shocks (Relative Frequencies)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	coll. layoffs	ind. layoffs	temp. layoffs	subsidized reduction of working hours	non-subsidized reduction of hours	non-renewal of temp. contracts	early re-tirement	freezes or reductions of new hires	reduction of agency workers	base wage cuts or freezes	cuts of perf.-related pay
Overall means	0.030	0.047	0.031	0.012	0.040	0.009	0.004	0.088	0.040	0.059	0.122
Obs.	759	759	759	759	759	759	759	759	759	747	754
Demand shocks:											
normal def. = 0	0.012	0.021	0.023	0.012	0.034	0.010	0.002	0.057	0.024	0.060	0.103
normal def. = 1	0.072 ***	0.106 ***	0.049 ***	0.010	0.048 *	0.007	0.008	0.153 ***	0.072 ***	0.060	0.162 ***
narrow def. = 0	0.016	0.023	0.023	0.012	0.032	0.009	0.002	0.059	0.026	0.056	0.102
narrow def. = 1	0.082 ***	0.131 ***	0.059 ***	0.013	0.063 ***	0.009	0.011 **	0.187 ***	0.086 ***	0.073	0.192 ***
broad def. = 0	0.012	0.022	0.021	0.009	0.025	0.003	0.002	0.046	0.023	0.061	0.106
broad def. = 1	0.056 ***	0.082 ***	0.044 **	0.015 *	0.061 ***	0.016 **	0.006	0.147 ***	0.060 ***	0.058	0.145 ***
Financial shocks:											
normal def. = 0	0.023	0.038	0.029	0.011	0.032	0.006	0.003	0.069	0.034	0.053	0.098
normal def. = 1	0.069 **	0.081 **	0.043 ***	0.017	0.082 **	0.021	0.005	0.168 ***	0.066	0.081	0.234 ***
narrow def. = 0	0.025	0.038	0.027	0.012	0.034	0.006	0.003	0.070	0.031	0.060	0.106
narrow def. = 1	0.132 ***	0.160 ***	0.107 ***	0.008	0.147 **	0.047 **	0.016	0.349 ***	0.169 ***	0.017	0.368 ***
broad def. = 0	0.023	0.031	0.027	0.011	0.033	0.006	0.003	0.063	0.030	0.052	0.097
broad def. = 1	0.064 **	0.100 ***	0.046 ***	0.015	0.069 **	0.018	0.005	0.175 ***	0.074	0.083 **	0.218 ***

Asterisks indicate that firm reactions take place significantly (99 percent, 95 percent, or 90 percent significance levels) more often in the case of a shock than in in the absence of a shock (this is based on one-sided t tests of the hypothesis that the mean of the reaction variable is larger in the case of a shock than in the absence of a shock. For the definition of of the "normal", "narrow" and "broad" definitions of demand and financial shocks, respectively, see the text. Results are weighted (basic sampling weights).

Before turning into the detailed results, some observations concerning the regressions as a whole: (i) by and large, the results of the unweighted regressions and those with the basic sampling weights are rather similar. When employment weights are used, the effects are markedly different, and frequently very high (in absolute terms) marginal effects are reported. This is probably the results of some very large firms dominating the overall results. (ii) Demand shock variables and credit shock variables are rarely both strongly statistically significant at the same time – mostly only the demand shock variable is, possibly due to the correlation between the two and the higher number of demand shocks in the data. (iii) Sometimes, certain sectors or size classes are perfectly associated with the absence of a firm reaction variable. (See the tables in appendix 1.) Also, as indicated above, the narrow definition of credit shocks does not apply to the firms in financial services. These cases imply a drop in the number of observations (especially in the case of subsidized reductions in working hours).

Are shocks still associated with the adjustment of employment and wages when sector and firm size are controlled for? This seems indeed to be the case when unweighted or firm-weighted data are used.

Shocks (demand shocks, and to a somewhat lesser extent credit shocks) increase the probability of layoffs considerably (especially collective and mass layoffs). The same holds for freezes of new hires, the reduction of agency workers and cuts of performance-related pay. In the latter case, credit shocks appear to matter a bit more than demand shocks. There is also weak evidence that shocks increase the probability of a (non-subsidized) reduction of working hours and of early retirement. No evidence was found that there is a positive association of shocks and a subsidized reduction of working time, a non-renewal of temporary contracts and cuts or freezes of base wages, respectively. However, when it comes to employment weights, the evidence is considerably weaker. There is only relatively robust evidence of an association between shocks and layoffs (individual and temporary) and cuts of performance-related pay components.

Table 17: Firms' Reactions to Negative Shocks - Probit Estimation Results (Marginal Effects)

	"Normal" definition of shocks			"Narrow" definition of shocks			"Broad" definition of shocks		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Firm reaction	un-weighted	basic sampling weights	empl.-adjusted weights	un-weighted	basic sampling weights	empl.-adjusted weights	un-weighted	basic sampling weights	empl.-adjusted weights
Collective layoffs									
Negative demand shock	0.560**	0.751***	0.328	0.628***	0.737***	0.414	0.420*	0.616***	0.229
	(3.216)	(4.088)	(1.064)	(3.439)	(3.615)	(1.462)	(2.395)	(3.311)	(0.775)
Negative credit shock	0.363	0.369	0.372	0.700**	0.686*	1.391**	0.359*	0.356	0.341
	(1.923)	(1.750)	(0.969)	(2.613)	(2.238)	(2.821)	(1.960)	(1.763)	(0.939)
Obs.	700	700	700	688	688	688	701	701	701
Pseudo R^2	0.076	0.122	0.039	0.091	0.128	0.128	0.059	0.097	0.029
Individual layoffs									
Negative demand shock	0.669***	0.741***	0.942**	0.748***	0.777***	0.861*	0.476**	0.526**	0.585
	(4.280)	(4.262)	(2.925)	(4.622)	(4.079)	(2.355)	(2.954)	(2.878)	(1.884)
Negative credit shock	0.269	0.272	-0.743	0.756**	0.747**	0.766*	0.457**	0.550**	0.016
	(1.518)	(1.426)	(1.593)	(3.113)	(2.766)	(2.295)	(2.711)	(2.989)	(0.043)
Obs.	739	739	739	722	722	722	740	740	740
Pseudo R^2	0.077	0.093	0.178	0.106	0.118	0.188	0.066	0.087	0.127
Temporary layoffs									
Negative demand shock	0.355*	0.329	0.927***	0.419*	0.379*	1.003***	0.301	0.293	0.951***
	(2.007)	(1.809)	(3.294)	(2.242)	(1.963)	(3.723)	(1.770)	(1.602)	(3.712)
Negative credit shock	0.399*	0.091	-0.156	0.918***	0.564*	0.292	0.474*	0.157	0.108
	(1.965)	(0.429)	(0.510)	(3.324)	(1.994)	(0.668)	(2.493)	(0.791)	(0.354)
Obs.	700	700	700	688	688	688	701	701	701
Pseudo R^2	0.062	0.038	0.134	0.100	0.061	0.163	0.067	0.038	0.138
Subsidized reduction of working hours									
Negative demand shock	0.115	-0.071	-0.173	0.118	0.039	-0.083	0.435	0.251	0.419
	(0.437)	(-0.232)	(-0.483)	(0.424)	(0.129)	(-0.243)	(1.747)	(0.883)	(1.495)
Negative credit shock	0.319	0.250	0.458	0.258	-0.055	-0.142	0.145	0.068	0.260
	(1.059)	(0.781)	(1.074)	(0.513)	(-0.121)	(-0.323)	(0.483)	(0.208)	(0.628)
Obs.	456	456	456	452	452	452	457	457	457
Pseudo R^2	0.104	0.089	0.126	0.098	0.084	0.109	0.120	0.092	0.137
Non-subidized reduction of working hours									
Negative demand shock	0.293	0.177	0.328	0.410*	0.315	0.410	0.443**	0.429*	0.360
	(1.837)	(0.971)	(1.002)	(2.463)	(1.709)	(1.180)	(2.810)	(2.410)	(1.199)
Negative credit shock	0.361*	0.392	-0.120	0.457	0.698*	0.515	0.283	0.311	-0.161
	(1.976)	(1.830)	(-0.344)	(1.645)	(2.269)	(1.443)	(1.601)	(1.549)	(-0.496)
Obs.	739	739	739	722	722	722	740	740	740
Pseudo R^2	0.069	0.057	0.052	0.070	0.071	0.066	0.078	0.072	0.052
Non-renewal of temporary contracts									
Negative demand shock	-0.290	-0.223	-1.193***	-0.156	-0.069	-1.015***	0.420	0.535	0.550
	(-1.198)	(-0.817)	(-3.520)	(-0.610)	(-0.249)	(-3.347)	(1.610)	(1.900)	(1.611)
Negative credit shock	0.365	0.544	0.636	0.751*	0.947*	0.163	0.163	0.314	0.342
	(1.271)	(1.736)	(1.306)	(2.080)	(2.355)	(0.366)	(0.592	(1.093)	(0.740)
Obs.	620	620	620	611	611	611	621	621	621
Pseudo R^2	0.030	0.067	0.154	0.041	0.092	0.113	0.041	0.090	0.135

Continued on the next page.

Table 17 (Continued)

	"Normal" definition of shocks			"Narrow" definition of shocks			"Broad" definition of shocks		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	un-weighted	basic sampling weights	empl.-adjusted weights	un-weighted	basic sampling weights	empl.-adjusted weights	un-weighted	basic sampling weights	empl.-adjusted weights
Early retirement									
Negative demand shock	0.384	0.609*	-0.266	0.465	0.724*	-0.171	0.385	0.550*	-0.429
	(1.408)	(2.118)	(-0.396)	(1.685)	(2.433)	(-0.275)	(1.477)	(2.207)	(-0.694)
Negative credit shock	-0.185	0.210	-2.024**	0.590	0.917*	-0.305	-0.229	0.161	-1.986**
	(-0.506)	(0.573)	(-3.067)	(1.469)	(2.375)	(-0.708)	(-0.620)	(0.445)	(-3.108)
Obs.	495	495	495	486	486	486	496	496	496
Pseudo R^2	0.080	0.160	0.431	0.103	0.218	0.392	0.082	0.148	0.440
Freeze of new hires									
Negative demand shock	0.544***	0.532***	0.438	0.637***	0.620***	0.533	0.572***	0.583***	0.427
	(4.253)	(3.684)	(1.705)	(4.610)	(3.886)	(1.956)	(4.467)	(4.083)	(1.755)
Negative credit shock	0.434**	0.464**	-0.120	1.058***	1.119***	0.809*	0.550***	0.546***	-0.055
	(2.878)	(2.804)	(-0.378)	(4.201)	(4.211)	(2.005)	(3.956)	(3.658)	(-0.191)
Obs.	739	739	739	722	722	722	740	740	740
Pseudo R^2	0.082	0.069	0.048	0.112	0.111	0.070	0.101	0.092	0.049
Reduction of agency workers									
Negative demand shock	0.509**	0.561**	0.313	0.551**	0.552**	0.313	0.386*	0.348*	0.233
	(3.219)	(3.230)	(1.004)	(3.272)	(2.810)	(0.907)	(2.497)	(2.088)	(0.808)
Negative credit shock	0.082	0.317	-0.330	0.714**	1.034***	1.168**	0.209	0.468**	0.012
	(0.435)	(1.691)	(-0.748)	(2.598)	(3.908)	(2.791)	(1.233)	(2.697)	(0.030)
Obs.	739	739	739	722	722	722	740	740	740
Pseudo R^2	0.174	0.168	0.140	0.192	0.208	0.166	0.168	0.161	0.135
Freezes or cuts of base wages									
Negative demand shock	-0.039	-0.063	-0.504	-0.039	0.048	-0.500	-0.075	-0.064	-0.597*
	(-0.241)	(-0.355)	(-1.930)	(-0.218)	(0.240)	(-1.715)	(-0.499)	(-0.374)	(-2.476)
Negative credit shock	0.231	0.235	0.539	0.185	-0.524	0.626	0.333	0.278	0.591*
	(1.245)	(1.143)	(1.732)	(0.560)	(-1.834)	(1.161)	(1.932)	(1.439)	(1.987)
Obs.	727	727	727	707	707	707	727	727	727
Pseudo R^2	0.039	0.033	0.067	0.042	0.037	0.063	0.045	0.035	0.084
Cuts of performance-related pay									
Negative demand shock	0.387**	0.201	0.389	0.490***	0.317*	0.675*	0.271*	0.087	0.180
	(3.082)	(1.340)	(1.740)	(3.684)	(1.986)	(2.524)	(2.234)	(0.601)	(0.843)
Negative credit shock	0.412**	0.551**	0.771**	0.641**	0.902**	0.553	0.448**	0.540***	0.748**
	(2.805)	(3.116)	(2.643)	(2.615)	(3.123)	(1.298)	(3.221)	(3.295)	(2.659)
Obs.	734	734	734	714	714	714	735	735	735
Pseudo R^2	0.070	0.048	0.127	0.081	0.061	0.114	0.066	0.045	0.110

Robust z-statistics in parentheses. ***, ** and * denote 99, 95 and 90 percent significance levels, respectively. All regression specifications contain constant terms as well as sector and size-class controls.

5 The WDN 3 Results Compared to the Previous WDN Surveys

As mentioned earlier, there were two predecessor firm surveys within the WDN. Austria took place in both of them. Before describing the results, it is necessary to emphasize that all three surveys were ad-hoc, and even though they have many similarities, they are not harmonized over time. In the following, only (negative) demand shocks are dealt with, because demand shocks are the only kind of shocks that is tackled in all three surveys. Demand shocks are, however, embedded differently in the three surveys. In the following, it is tried to make the results comparable.

The WDN 1 survey took place in the autumn of 2007 and it focused on the reaction of firms to a *hypothetical* demand shock. The results of this survey to which 560 firms responded are described in Kwapil (2009a). Most firms (88 and 81[25] percent with firm and employment weights, respectively) reported that they would react by cutting costs (question 21 of the WDN 1 survey). Among these firms, the majority of firms said that they would rather reduce non-labor costs (61 and 54 percent for firm and employment weights, respectively) than labor costs (question 22). For cutting labor costs there were five options for which the rescaled results[26] are shown in the first two rows in table 18. (In the WDN 1 survey, firms were only allowed to tick the most important of these options.)

The WDN 2 survey had been conducted amidst the Great Recession in 2009. Compared with the first survey, it was smaller in scope (with only a small subset of questions from WDN 1); this survey was answered by 733 firms. In contrast to the WDN 1, the follow-up survey asked firms whether the economic and financial crisis had *actually* led to a fall in demand. Apart from that, the structure of the relevant questions was identical to the previous survey.[27] Again, a majority of firms had reacted (or had planned to react) by cutting costs (72 and 84 percent for firm and employment weights, respectively). Still, most firms had preferred to cut rather non-labor costs than labor costs, but the importance of cutting non-labor costs had declined considerably (with shares of 34 and 28 percent for firm and employment weights, respectively). The rescaled results for the WDN 2 labor cost adjustment measures are shown in the third and the fourth row of the table.

Finally, table 18 shows the WDN 3 results. They show the shares of the various labor cost cutting strategies given that a demand shock (the "normal" definition was used) had occurred in the reference period. In contrast to the predecessor surveys, in WDN 3 cutting non-labor costs (or other options like reducing output etc.) were not available as options. On the other hand, the WDN 3 includes two reaction types (early retirement and freezes/reductions of new hires) that were not present in the earlier questionnaires.[28] After subsuming the various reaction possibilities of WDN 3 into the broader categories of WDN 1 and 2 and rescaling, the last two rows display the WDN 3 results in a way that is comparable to the previous surveys.

What does the comparison of the three surveys show? First, it reveals (again) that the kind of weights matters in some cases. Most notably, in WDN 1, the importance of reductions in flexible pay components is considerably higher when firm weights are used instead of employment weights. In contrast, cutting hours was more important according to the employment-weighted results than

[25] The results reported here are based on our own calculations and differ marginally from those reported in Kwapil (2009a).

[26] The results are rescaled so that the shares of the five measures sum up to 1.

[27] Questions 3 and 4 in WDN 2 were identical to questions 21 and 22 in WDN 1, respectively.

[28] The comparison in the table is only valid if the chosen alternatives would also have been ticked in the presence of the options that were left out (i.e. if the independence of irrelevant alternatives holds).

according to firm weights. In most other cases, the differences between the weighting schemes are relatively small. In the following, I concentrate on the employment-weighted results.

Table 18: Responses of Firms to a Demand Shock (Relative Frequencies)

Survey	weights	reduce base wages	reduce flexible wage components (bonuses, benefits)	reduce number of permanent employees	reduce number of temporary employees / other types of workers	adjust number of hours worked per employee
WDN 1	basic sampling weights	0.000 *(5)*	0.516 *(1)*	0.337 *(2)*	0.023 *(4)*	0.123 *(3)*
	empl.-adjusted weights	0.000 *(5)*	0.280 *(2)*	0.247 *(3)*	0.141 *(4)*	0.332 *(1)*
WDN 2	basic sampling weights	0.010 *(5)*	0.200 *(2)*	0.188 *(3)*	0.133 *(4)*	0.469 *(1)*
	empl.-adjusted weights	0.012 *(5)*	0.249 *(2)*	0.232 *(3)*	0.114 *(4)*	0.393 *(1)*
WDN 3	basic sampling weights	0.023 *(5)*	0.301 *(2)*	0.422 *(1)*	0.146 *(3)*	0.108 *(4)*
	empl.-adjusted weights	0.026 *(5)*	0.377 *(1)*	0.290 *(2)*	0.166 *(3)*	0.142 *(4)*

Notes: The numbers in parentheses are the ranks of the five options to reduce labor costs. The indicated shares for WDN 1 and 2 (based on questions 22 and 4 of the respective surveys) have been rescaled to sum up to 1 by dividing through 1 minus the share of the option "reduce non-labor costs". Reducing non-labor costs option was preferred by the majority of firms (WDN 1: 0.611 for basic sampling weights, 0.543 for employment weights; WDN 2: 0.336 for basic sampling weights, 0.282 for employment weights, respectively). As regards the WDN 3 results, the "normal" definition of shocks was used (see table 16). Results were subsumed into the categories of WDN1/2 (e. g. all layoff categories, i. e. columns (1)-(3) of table 16, were summed up for the option "reduce number of permanent employees", and "non-renewal of temporary contracts" and "reduction of agency workers" (columns (6) and (9) of that table, respectively) were put together into the option "reduce numer of temporary employees / other types of workers"). Results were then rescaled by leaving out the options "early retirement" and "freezes or reductions of new hires" (columns (7) and (8) in table 16) and by replacing the results in column (10) of that table with the share of wage cuts (disregarding wage freezes).

In all surveys, a reduction of base wages was an option that (almost) no firm considered. However, in WDN 2 and 3, i.e. in the severe recession of 2009 or in the protracted low-growth period of 2010–2013 there were at least some firms who chose this option. On the other hand, cuts in flexible / performance-related pay components were chosen quite often in all surveys (rank (2) in WDN 1 and 2). The importance of this strategy seems also to have risen recently (rank (1) in WDN 3). Turning to the reduction of labor input, more firms chose to reduce the number of their permanent employees rather than other types of employees (like temporary or agency workers).[29] Both reducing permanent and temporary / agency workers were more important in WDN 3 than in the predecessor surveys.

The most interesting result is probably the reduced importance of adjusting of working hours in case of a demand shock: it had been the most important option in WDN 1 and 2[30], but was of minor importance (rank (4)) in WDN 3. Probably, labor-hoarding was preferable for firms in the Great Recession which was relatively short-lived and where reductions of working time were aided by short-term working schemes. However, in the low-growth years (especially from 2012 onwards) which coincide partly with the reference period firms appear to have changed their behavior, reducing labor input by layoffs. This is consistent with the macroeconomic development in that period of rising unemployment and increased employment to unemployment flows (see Schoiswohl and Wüger, 2016).

[29] However, one has to bear in mind that merely in one third of all firms agency workers were present (see section 2.2). So, clearly, the job risk loss of temporary / agency workers in case of a demand shock was higher than for permanent employees.

[30] See also table 8 in Fabiani, Lamo, Messina and Rõõm (2015) where Austria stands out as the country where working-time adjustment was the most important channel of adjustment to shocks.

6 Summary

Austria participated in the third WDN firm survey which took place towards the end of 2014. Its questions focussed mainly on the years in the aftermath of the Great Recession, i.e. the period between 2010 and 2013. The economic environment in this period was characterized by low GDP growth and rising unemployment. Austria's corporatist wage-setting institutions and labor market regulations were stable in these years.

The Austrian sample of the WDN 3 dataset consists of 784 firms in manufacturing, construction, trade, business services and financial intermediation. Most firms are relatively large and old. For 96 percent of the firms there existed a collective agreement (either at the sectoral or at the firm level). Collective agreements are usually adjusted once a year. The first major section of the questionnaire was devoted to shocks and cost developments. More than 30 percent of firms reported negative demand shocks. The availability of credit, on the other hand, was only a problem for about 7 percent of the firms. The remaining two main sections of the questionnaire focussed on labor force adjustment and wage adjustment of firms. In reducing the labor input firms could indicate a number of measures how to achieve this end. Wage adjustment, on the other hand, could be achieved by reductions in base wages and performance-related pay, respectively.

The empirical part of this report deals with the identification of demand and credit shocks and the reactions of firms to these. The main findings are: When faced with negative demand (or credit) shocks, firms tend to react by (1) laying off workers, (1) freezing new hires, (3) reducing the number of agency workers or (4) cutting performance-related pay. Other options (like the reduction of working hours, the non-renewal of temporary contracts, early retirement, freezes or cuts of base wages) seem to play only a minor role or no role at all. A comparison of firms' reactions to demand shocks with the results from the earlier surveys (WDN 1 and 2) indicates that Austrian firms were consistently reluctant to cut base wages in all the surveys while being prepared to cut flexible wage components (such as bonus payments etc.). In WDN 3, firms were more likely to reduce the number of permanent employees (and also agency workers) while they were less likely to adapt to shocks by reducing working time.

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Appendix 1: Detailed Descriptive Results

Table A1.1: Results on Section B ("Changes in the Economic Environment")

	Sector					Size				Age					Structure		Ownership		Autonomy			*Total*	
	Manufacturing	Construction	Trade	Business services	Financial intermediation	1-19 employees	20-49 employees	50-199 employees	200 employees and more	less than 10 years	10 to less than 20 years	20 to less than 50 years	50 to less than 100 years	more than 100 years	Single-establishment	Multi-establishment	Mainly domestic	Mainly foreign	Parent company	Subsidiary / affiliate	Does not apply	*total mean*	*total obs.*
Question set 5 ***(share of "moderate" + "strong" negative shocks [1])***																							
a) Level of demand	0.314	0.345	0.355	0.281	0.337	0.356	0.304	0.329	0.266	0.203	0.262	0.348	0.331	0.310	0.306	0.331	0.330	0.226	0.299	0.277	0.330	*0.316*	*778*
b) Volatility / uncertainty of demand	0.488	0.376	0.372	0.399	0.294	0.347	0.364	0.448	0.449	0.423	0.389	0.384	0.430	0.412	0.400	0.406	0.400	0.454	0.369	0.445	0.389	*0.402*	*773*
c) Access to external financing	0.153	0.252	0.129	0.175	0.186	0.186	0.216	0.159	0.122	0.186	0.201	0.192	0.124	0.166	0.176	0.170	0.182	0.106	0.161	0.132	0.188	*0.172*	*764*
d) Customer's ability to pay	0.342	0.480	0.342	0.325	0.260	0.294	0.407	0.346	0.372	0.342	0.347	0.341	0.412	0.296	0.335	0.380	0.357	0.334	0.439	0.324	0.354	*0.355*	*774*
e) Availability of supplies	0.140	0.101	0.152	0.080	0.100	0.158	0.099	0.108	0.083	0.043	0.174	0.112	0.080	0.140	0.117	0.107	0.109	0.116	0.053	0.153	0.104	*0.112*	*758*
Question set 6 ***(share of "long lasting" shocks)***																							
a) Level of demand	0.745	0.870	0.658	0.608	1.000	0.804	0.565	0.648	0.723	0.660	0.767	0.609	0.789	0.728	0.697	0.660	0.669	0.755	0.590	0.864	0.628	*0.683*	*128*
b) Volatility / uncertainty of demand	0.655	0.825	0.658	0.680	0.500	0.613	0.750	0.723	0.637	0.436	0.699	0.758	0.564	0.709	0.676	0.693	0.703	0.549	0.936	0.630	0.683	*0.686*	*132*
c) Access to external financing	0.556	0.460	0.479	0.487	1.000	0.463	0.485	0.593	0.405	0.382	0.505	0.522	0.390	0.641	0.488	0.517	0.497	0.459	0.742	0.753	0.438	*0.494*	*50*
d) Customers' ability to pay	0.579	0.634	0.644	0.369	1.000	0.458	0.723	0.435	0.674	0	0.717	0.479	0.438	0.772	0.545	0.528	0.583	0.331	0.257	0.419	0.613	*0.547*	*38*
e) Availability of supplies	0.732	0	0.786	1.000	.	0.819	1.000	0.531	1.000	1.000	0.616	0.676	1.000	1.000	0.807	0.767	0.765	1.000	1.000	0.655	0.831	*0.789*	*15*
Questions 7-21 ***(share of "relevant" + "very relevant" credit constraints)*** [2]																							
a) Credit not available (working capital)	0.054	0.093	0.042	0.055	0	0.055	0.061	0.072	0.028	0.075	0.066	0.060	0.026	0.082	0.059	0.053	0.061	0.026	0.084	0.036	0.061	*0.056*	*769*
b) Credit not available (new investment)	0.035	0.041	0.034	0.059	0	0.052	0.049	0.050	0.022	0.059	0.085	0.044	0.018	0.040	0.045	0.045	0.049	0.024	0.093	0.036	0.044	*0.045*	*755*
c) Credit not available (refinance debt)	0.036	0.039	0.009	0.007	0	0.012	0.019	0.020	0.017	0.032	0.008	0.018	0.013	0.031	0.019	0.016	0.020	0	0.030	0.025	0.014	*0.017*	*775*
d) Credit cond. too onerous (working cap.)	0.032	0.012	0.052	0.058	0	0.064	0.044	0.044	0.019	0.080	0.050	0.046	0.027	0.042	0.057	0.027	0.048	0.019	0.031	0.018	0.054	*0.044*	*769*
e) Credit cond. too onerous (new inv.	0.019	0.047	0.021	0.031	0	0.040	0.023	0.042	0	0.059	0.012	0.038	0.021	0.015	0.035	0.020	0.032	0.008	0	0.013	0.036	*0.028*	*756*
f) Credit cond. too onerous (ref. debt)	0.014	0.006	0.009	0.007	0	0.008	0.004	0.013	0.007	0.032	0	0.006	0.004	0.023	0.015	0	0.010	0	0	0.005	0.010	*0.008*	*775*
Question set 22 ***(share of "moderate increase" + "strong increase")***																							
a) Totals costs	0.796	0.729	0.768	0.854	0.791	0.777	0.836	0.814	0.773	0.894	0.771	0.813	0.800	0.761	0.805	0.799	0.796	0.839	0.774	0.813	0.801	*0.802*	*758*
b) Labor costs	0.892	0.832	0.852	0.909	0.890	0.854	0.896	0.888	0.877	0.942	0.865	0.894	0.859	0.862	0.866	0.896	0.877	0.886	0.842	0.876	0.884	*0.880*	*773*
c) Financing costs	0.292	0.342	0.230	0.255	0.218	0.245	0.277	0.256	0.304	0.341	0.320	0.252	0.283	0.186	0.242	0.302	0.282	0.188	0.242	0.217	0.289	*0.269*	*744*
d) Costs of supplies	0.667	0.633	0.595	0.662	0.714	0.599	0.647	0.635	0.704	0.770	0.603	0.672	0.617	0.589	0.606	0.694	0.641	0.618	0.751	0.630	0.636	*0.644*	*769*
e) Other costs	0.524	0.481	0.492	0.515	0.550	0.463	0.506	0.526	0.529	0.641	0.416	0.551	0.457	0.504	0.497	0.521	0.493	0.565	0.515	0.553	0.487	*0.507*	*524*
Question set 23 ***(share of "moderate increase" + "strong increase")***																							
a) Base wages	0.924	0.835	0.930	0.914	0.914	0.904	0.902	0.912	0.912	0.883	0.918	0.915	0.870	0.959	0.906	0.909	0.899	0.957	0.927	0.910	0.904	*0.908*	*779*
b) Flexible wage components	0.430	0.397	0.497	0.507	0.408	0.407	0.436	0.513	0.525	0.430	0.613	0.481	0.413	0.411	0.435	0.514	0.457	0.542	0.607	0.536	0.432	*0.472*	*725*
c) No. of permanent employees	0.493	0.432	0.407	0.584	0.315	0.450	0.473	0.494	0.581	0.567	0.623	0.494	0.467	0.360	0.469	0.525	0.485	0.529	0.521	0.505	0.489	*0.496*	*767*
d) No. of temporary / fixed-term workers	0.384	0.282	0.239	0.271	0.082	0.177	0.254	0.324	0.355	0.439	0.250	0.266	0.289	0.281	0.246	0.319	0.265	0.372	0.302	0.336	0.257	*0.284*	*597*
e) No. Of agency workers and others	0.190	0.231	0.099	0.191	0	0.117	0.207	0.228	0.113	0.165	0.199	0.169	0.195	0.093	0.170	0.166	0.178	0.137	0.109	0.104	0.199	*0.171*	*489*
f) Working hours per employee	0.417	0.285	0.377	0.562	0.229	0.343	0.466	0.457	0.503	0.597	0.507	0.410	0.453	0.359	0.449	0.431	0.421	0.539	0.398	0.486	0.429	*0.442*	*763*
Question set 24 ***(share of "moderate" + "strong" negative shocks [1])***																							
a) Domestic demand	0.315	0.302	0.347	0.251	0.333	0.298	0.263	0.288	0.340	0.217	0.259	0.287	0.307	0.392	0.281	0.306	0.295	0.279	0.343	0.314	0.282	*0.295*	*746*
b) Foreign demand	0.211	0.183	0.177	0.236	0.266	0.242	0.186	0.217	0.217	0.256	0.242	0.200	0.183	0.244	0.210	0.216	0.238	0.089	0.226	0.197	0.216	*0.212*	*549*
c) Domestic price	0.383	0.356	0.494	0.589	0.345	0.513	0.513	0.485	0.442	0.539	0.511	0.462	0.530	0.440	0.483	0.503	0.490	0.490	0.443	0.486	0.498	*0.490*	*745*
d) Foreign price	0.319	0.151	0.418	0.377	0.117	0.400	0.348	0.367	0.297	0.425	0.367	0.359	0.366	0.237	0.357	0.347	0.331	0.469	0.279	0.344	0.365	*0.351*	*544*

Weighted results (basic sampling weights). [1] For this table, some of the original questions were recoded so that they all reflect *negative* shocks (5a, 5c, 5d, 5e, 24a,24b). For example, the figures on question 5a report the share of "moderate" or "strong" *decreases* of demand. Likewise, figures on questions 24a and b report decreases of domestic and foreign demand, respectively. Results on questions 24c and d refer to price *increases*. [2] The results are reported on the "reduced form" questions like in the common template. See the text and appendix 2.

Table A1.2: Results on Section C ("Labor Force Adjustments")

	Sector					Size				Age					Structure		Ownership		Autonomy			*Total*	
	Manufacturing	Construction	Trade	Business services	Financial intermediation	1-19 employees	20-49 employees	50-199 employees	200 employees and more	less than 10 years	10 to less than 20 years	20 to less than 50 years	50 to less than 100 years	more than 100 years	Single-establishment	Multi-establishment	Mainly domestic	Mainly foreign	Parent company	Subsidiary / affiliate	Does not apply	*total mean*	*total obs.*
Questions 25-28 *(employee characteristics / composition)*																							
No. of employees	221.8	87.6	275.0	221.1	1054.7	13.2	32.0	91.8	939.4	84.9	423.7	168.8	194.9	349.0	78.9	418.1	191.9	405.6	1173.4	433.0	74.9	*232.8*	*784*
Share of permanent full-time employees	83.2	83.1	71.4	68.4	70.5	63.9	77.3	77.4	76.5	64.7	71.6	74.6	78.9	70.2	73.2	74.9	73.1	80.4	77.3	81.3	71.1	*74.0*	*710*
Leasing, agency workers etc. relative to standard contracts (%)	5.8	3.7	2.3	9.2	0.9	5.8	8.7	3.8	5.2	13.7	5.6	7.0	3.6	2.8	7.4	3.9	5.9	5.9	4.9	5.9	5.9	*5.8*	*699*
Share of higher-skilled non manual workers (ISCO 1-3) (%)	11.2	9.0	12.3	24.4	39.4	22.1	17.8	14.0	14.8	17.2	28.2	18.4	10.3	12.6	19.6	14.1	16.7	20.9	21.7	18.5	16.3	*17.2*	*674*
Share of workers with a tenure of more than 5 years (%)	65.3	67.6	61.5	45.6	69.9	55.9	56.9	57.0	58.4	28.7	47.7	56.7	66.7	66.8	57.8	55.6	56.6	61.6	57.4	58.0	56.7	*57.0*	*678*
Questions 29 and 30 *(need to reduce labor input)*																							
29) Need to reduce labor input / alter composition in 2010-13 (share)	0.269	0.188	0.175	0.159	0.091	0.141	0.213	0.162	0.231	0.151	0.177	0.224	0.098	0.263	0.202	0.166	0.175	0.268	0.214	0.231	0.164	*0.185*	*759*
If yes, which measures did you use? (share of "moderately" + "strong")																							
30a) Collective layoffs	0.101	0.336	0.178	0.128	0	0.233	0.142	0.152	0.154	0.132	0.194	0.168	0.164	0.139	0.185	0.133	0.132	0.272	0.192	0.203	0.145	*0.164*	*163*
30b) Individual layoffs	0.137	0.246	0.268	0.335	0.221	0.333	0.246	0.196	0.268	0.116	0.448	0.225	0.227	0.233	0.268	0.235	0.249	0.237	0.212	0.364	0.212	*0.255*	*163*
30c) Temporary layoffs	0.169	0.278	0.167	0.118	0	0.225	0.137	0.174	0.150	0.027	0.155	0.097	0.408	0.227	0.214	0.095	0.190	0.061	0.232	0.084	0.201	*0.166*	*163*
30d) Subsidized reduction of working hours	0.121	0	0	0.093	0	0	0.041	0.137	0.057	0	0.131	0.050	0.024	0.089	0.037	0.101	0.061	0.073	0.109	0.110	0.035	*0.063*	*163*
30e) Non-subsidized reduction of working hours	0.223	0.213	0.157	0.247	0.221	0.089	0.252	0.224	0.249	0	0.169	0.219	0.311	0.235	0.188	0.254	0.227	0.167	0.064	0.223	0.234	*0.215*	*163*
30f) Non-renewal of temporary contracts at expiration	0.055	0	0.051	0.061	0	0.061	0.073	0.020	0.034	0.067	0.039	0.071	0	0.014	0.043	0.053	0.048	0.043	0.049	0.034	0.054	*0.047*	*163*
30g) Early retirement schemes	0.039	0	0	0.017	0.337	0.028	0.004	0.006	0.046	0.022	0	0.013	0.060	0.022	0.016	0.025	0.008	0.075	0	0.049	0.008	*0.020*	*163*
30h) Freeze / reduction of new hires	0.418	0.426	0.396	0.580	0.885	0.427	0.409	0.610	0.453	0.675	0.622	0.423	0.528	0.395	0.477	0.475	0.493	0.420	0.396	0.612	0.430	*0.476*	*163*
30i) Reduction of agency workers and others	0.377	0.303	0.157	0.099	0.442	0.182	0.080	0.178	0.445	0.085	0.131	0.210	0.465	0.173	0.193	0.256	0.172	0.449	0.309	0.367	0.140	*0.218*	*163*
Question set 31 *(share of "more difficult" + "much more difficult" than in 2010)*																							
a) Lay off employees for economic reasons (collectively)	0.186	0.329	0.209	0.175	0.166	0.161	0.225	0.234	0.208	0.190	0.143	0.231	0.233	0.186	0.193	0.228	0.212	0.179	0.113	0.190	0.219	*0.209*	*744*
b) Lay off employees for economic reasons (individually)	0.191	0.254	0.179	0.230	0.128	0.261	0.212	0.193	0.180	0.153	0.149	0.251	0.216	0.190	0.189	0.238	0.224	0.109	0.246	0.109	0.239	*0.212*	*750*
c) Dismiss employees for disiciplinary reasons	0.217	0.248	0.254	0.275	0.212	0.320	0.223	0.248	0.223	0.223	0.234	0.278	0.223	0.285	0.250	0.258	0.259	0.250	0.155	0.205	0.278	*0.254*	*743*
d) Lay off employees temporarily for economic reasons	0.083	0.146	0.120	0.110	0.105	0.142	0.082	0.127	0.099	0.041	0.158	0.104	0.111	0.124	0.116	0.111	0.115	0.116	0	0.102	0.129	*0.113*	*742*
e) To hire employees (costs of recruitment)	0.217	0.277	0.245	0.256	0.194	0.218	0.261	0.271	0.236	0.152	0.282	0.240	0.259	0.266	0.210	0.294	0.257	0.190	0.166	0.191	0.275	*0.248*	*746*
f) Adjust working hours	0.344	0.382	0.365	0.360	0.152	0.333	0.351	0.401	0.327	0.218	0.387	0.330	0.391	0.406	0.337	0.381	0.365	0.316	0.158	0.317	0.389	*0.357*	*749*
g) Move employees to other locations	0.208	0.118	0.219	0.225	0.232	0.150	0.203	0.226	0.237	0.266	0.248	0.188	0.188	0.201	0.162	0.256	0.204	0.202	0.178	0.182	0.217	*0.204*	*737*
h) Move employees across different jobs	0.227	0.176	0.244	0.255	0.109	0.236	0.220	0.230	0.246	0.236	0.257	0.201	0.265	0.229	0.209	0.258	0.239	0.185	0.195	0.175	0.255	*0.232*	*740*
i) Adjust wages of incumbent workers	0.329	0.399	0.336	0.344	0.276	0.314	0.363	0.416	0.259	0.269	0.337	0.354	0.352	0.360	0.323	0.377	0.358	0.277	0.205	0.285	0.383	*0.346*	*745*
j) Lower wages of new employees	0.381	0.383	0.353	0.454	0.342	0.435	0.433	0.395	0.339	0.426	0.422	0.427	0.361	0.373	0.388	0.422	0.405	0.374	0.249	0.333	0.441	*0.403*	*745*
Question set 33 *(obstacles for new hires; share of "relevant" + "very relevant")* [1]																							
a) Uncertainty about economic conditions	0.185	0.101	0.197	0.223	0.115	0.199	0.172	0.160	0.238	0.166	0.298	0.192	0.156	0.110	0.196	0.182	0.181	0.255	0.169	0.252	0.171	*0.189*	*753*
b) Insufficient availability of labour with the required skills	0.311	0.219	0.247	0.358	0.289	0.320	0.266	0.259	0.377	0.150	0.486	0.306	0.235	0.246	0.291	0.314	0.293	0.371	0.352	0.373	0.273	*0.300*	*755*
c) Acess to finance	0.052	0.056	0.072	0.082	0.021	0.089	0.063	0.062	0.065	0.047	0.124	0.056	0.074	0.044	0.065	0.075	0.069	0.079	0.043	0.069	0.072	*0.069*	*748*
d) Firing costs	0.186	0.151	0.110	0.194	0.097	0.203	0.142	0.129	0.191	0.103	0.277	0.158	0.128	0.133	0.171	0.153	0.170	0.139	0.173	0.137	0.173	*0.163*	*749*
e) Hiring costs	0.121	0.050	0.091	0.142	0	0.123	0.101	0.121	0.083	0.104	0.183	0.098	0.090	0.086	0.110	0.108	0.114	0.085	0.072	0.089	0.119	*0.109*	*751*
f) High payroll taxes	0.307	0.168	0.227	0.317	0.257	0.283	0.249	0.223	0.341	0.196	0.441	0.255	0.224	0.212	0.273	0.266	0.268	0.310	0.282	0.322	0.252	*0.268*	*754*
g) High wages	0.288	0.157	0.219	0.271	0.136	0.263	0.196	0.204	0.321	0.215	0.377	0.232	0.183	0.217	0.227	0.258	0.238	0.297	0.299	0.284	0.222	*0.240*	*753*
h) Risk that labor laws are changed	0.115	0.107	0.096	0.181	0.054	0.144	0.115	0.131	0.154	0.134	0.215	0.101	0.143	0.120	0.152	0.114	0.137	0.134	0.142	0.130	0.137	*0.135*	*750*
i) Costs of other inputs complementary to labor	0.130	0.057	0.074	0.064	0.042	0.038	0.070	0.062	0.150	0.051	0.062	0.068	0.088	0.112	0.069	0.086	0.071	0.128	0.218	0.091	0.058	*0.076*	*746*
j) Other	0.014	0.060	0.005	0.016	0	0.032	0.019	0.005	0.031	0.024	0.022	0.033	0.007	0	0.017	0.025	0.022	0.010	0	0.036	0.018	*0.020*	*597*

Weighted results (basic sampling weights). [1] Conditional on the affirmative answer to question 29.

Table A1.3: Results on Section D ("Flexibility of Wages and Salaries")

	Sector					Size				Age					Structure		Ownership		Autonomy			*Total*	
	Manufacturing	Construction	Trade	Business services	Financial intermediation	1-19 employees	20-49 employees	50-199 employees	200 employees and more	less than 10 years	10 to less than 20 years	20 to less than 50 years	50 to less than 100 years	more than 100 years	Single-establishment	Multi-establishment	Mainly domestic	Mainly foreign	Parent company	Subsidiary / affiliate	Does not apply	*total mean*	*total obs.*
Questions 34 and 35																							
Labor cost relative to total cost (%)	32.8	39.9	35.4	46.9	53.4	42.1	44.2	39.4	38.1	44.6	44.5	41.3	38.8	39.2	42.7	39.1	41.4	41.5	34.6	40.5	41.9	*41.1*	*588*
Performance related pay (bonuses etc.) relative to total pay (%)	3.4	2.6	5.0	4.4	4.9	3.4	3.5	4.9	4.9	2.8	4.8	4.3	4.1	3.4	3.6	4.7	3.9	6.0	5.5	5.1	3.7	*4.1*	*558*
Questions 36-38 *(collective agreements)*																							
At the firm level (share)	0.322	0.228	0.189	0.210	0.343	0.302	0.232	0.154	0.255	0.268	0.240	0.263	0.160	0.226	0.252	0.202	0.231	0.225	0.196	0.241	0.226	*0.230*	*755*
Outside the firm (share)	0.820	0.852	0.858	0.800	0.779	0.706	0.811	0.866	0.920	0.834	0.700	0.805	0.911	0.876	0.781	0.877	0.819	0.876	0.894	0.872	0.805	*0.825*	*755*
Either at firm level or outside the firm (share)	0.976	0.977	0.967	0.938	1.000	0.898	0.977	0.962	1.000	0.961	0.892	0.955	0.987	1.000	0.955	0.963	0.960	0.970	1.000	0.974	0.952	*0.959*	*755*
Proportion of employees covered by any collective agreement	74.3	71.5	68.1	62.3	79.7	58.5	61.6	73.0	77.2	77.7	56.0	65.0	69.3	81.4	65.3	70.3	66.9	72.6	67.5	72.4	66.2	*67.5*	*677*
Collective pay changes "once a year" (share)	0.897	0.757	0.781	0.787	0.877	0.707	0.819	0.827	0.843	0.773	0.823	0.781	0.831	0.801	0.789	0.816	0.797	0.855	0.918	0.830	0.779	*0.802*	*720*
Questions 39 and 40 (indexation of base wages to inflation)																							
Share of "yes" (before 2010)	0.206	0.396	0.297	0.360	0.342	0.438	0.412	0.239	0.195	0.345	0.399	0.346	0.270	0.246	0.356	0.287	0.336	0.213	0.308	0.220	0.361	*0.324*	*750*
If no, reason "no indexation rules" (before 2010) (share)	0.989	0.971	0.994	0.973	1.000	0.948	1.000	0.975	1.000	1.000	0.989	0.977	0.971	1.000	0.988	0.974	0.978	1.000	1.000	0.990	0.976	*0.981*	*537*
Share of "yes" (in 2010-13)	0.247	0.389	0.290	0.356	0.369	0.432	0.433	0.243	0.189	0.387	0.397	0.350	0.267	0.244	0.359	0.291	0.340	0.219	0.294	0.224	0.366	*0.327*	*750*
If no, reason "no indexation rules" (in 2010-13) (share)	1.000	0.944	1.000	0.983	1.000	0.959	1.000	0.980	1.000	1.000	0.989	0.976	0.985	1.000	0.983	0.988	0.983	1.000	1.000	1.000	0.977	*0.985*	*528*
Questions 41 and 42 *(frequency of base wage changes "once a year")*																							
Before 2010 (share)	0.834	0.763	0.857	0.795	0.734	0.774	0.808	0.812	0.852	0.858	0.874	0.776	0.806	0.818	0.805	0.814	0.807	0.832	0.915	0.863	0.787	*0.810*	*719*
In 2010-13	0.832	0.791	0.869	0.776	0.765	0.782	0.796	0.819	0.845	0.872	0.825	0.782	0.821	0.828	0.805	0.812	0.804	0.838	0.890	0.867	0.788	*0.809*	*712*
Questions 43-46 *(wage freezes and cuts)*																							
Wage freeze in 2010-13 (share)	0.032	0.023	0.014	0.089	0.040	0.046	0.062	0.050	0.039	0.011	0.118	0.033	0.052	0.037	0.060	0.035	0.052	0.019	0.075	0.042	0.050	*0.050*	*749*
Wage freeze in 2010 (share)	0.010	0.017	0.009	0.065	0	0.030	0.044	0.033	0.024	0	0.069	0.029	0.030	0.024	0.042	0.023	0.034	0.019	0.042	0.019	0.037	*0.033*	*745*
Wage freeze in 2011 (share)	0.022	0.017	0.009	0.071	0	0.036	0.048	0.040	0.024	0	0.093	0.030	0.032	0.024	0.047	0.027	0.039	0.019	0.042	0.028	0.041	*0.038*	*746*
Wage freeze in 2012 (share)	0.020	0.017	0.009	0.075	0	0.038	0.054	0.033	0.030	0.007	0.090	0.029	0.041	0.024	0.050	0.024	0.041	0.019	0.062	0.025	0.042	*0.039*	*748*
Wage freeze in 2013 (share)	0.010	0.023	0.014	0.073	0.040	0.032	0.047	0.043	0.032	0.004	0.077	0.032	0.039	0.037	0.047	0.030	0.040	0.019	0.055	0.028	0.042	*0.039*	*749*
Wage freeze in 2010 (% workers affected)	87.1	16.0	90.0	57.1	.	69.7	50.4	50.0	62.5	.	75.6	63.9	36.2	15.1	51.8	66.4	56.4	91.9	43.3	58.7	57.4	*56.4*	*20*
Wage freeze in 2011 (% workers affected)	52.5	16.0	90.0	54.6	.	55.0	55.4	49.1	44.0	.	70.8	58.1	24.8	16.0	49.1	61.7	52.9	92.8	10.0	68.0	51.5	*52.4*	*18*
Wage freeze in 2012 (% workers affected)	89.9	.	90.0	40.8	.	62.5	40.7	21.8	71.6	50.0	61.9	47.8	32.2	.	42.8	54.5	48.7	71.0	82.6	57.9	41.8	*48.0*	*16*
Wage freeze in 2013 (% workers affected)	100.0	12.0	82.5	43.8	32.5	64.9	39.8	27.1	52.2	100.0	66.5	48.2	22.9	39.0	40.0	49.9	42.3	92.8	42.0	51.1	41.3	*43.2*	*21*
Wage cut in 2010-13 (share)	0.024	0.005	0.023	0.006	0.020	0.011	0.008	0.011	0.026	0.007	0.009	0.015	0.004	0.038	0.012	0.015	0.012	0.027	0.038	0.023	0.008	*0.013*	*756*
Wage cut in 2010 (share)	0.021	0.005	0.014	0.003	0	0.007	0.004	0.007	0.021	0	0.009	0.009	0.004	0.025	0.008	0.010	0.007	0.027	0.031	0.017	0.004	*0.009*	*752*
Wage cut in 2011 (share)	0.021	0.005	0.018	0.003	0	0.011	0.004	0.007	0.021	0	0.009	0.012	0.004	0.025	0.010	0.010	0.008	0.027	0.031	0.017	0.006	*0.010*	*753*
Wage cut in 2012 (share)	0.024	0.005	0.014	0.003	0	0.007	0.004	0.007	0.023	0.007	0.009	0.009	0.004	0.025	0.008	0.011	0.007	0.027	0.038	0.017	0.004	*0.010*	*755*
Wage cut in 2013 (share)	0.021	0.005	0.018	0.006	0.020	0.007	0.008	0.011	0.023	0	0.009	0.012	0.004	0.038	0.010	0.014	0.010	0.027	0.031	0.023	0.006	*0.012*	*756*
Wage cut in 2010 (average wage cut in %)	5.0	5.0	3.3	3.0	.	4.3	3.0	3.0	5.0	.	3.0	3.5	.	5.0	4.0	3.9	4.7	3.0	5.0	3.2	4.6	*4.0*	*7*
Wage cut in 2011 (average wage cut in %)	5.0	.	2.0	.	.	2.0	.	.	5.0	.	.	2.0	.	5.0	2.0	5.0	2.5	.	5.0	.	2.0	*2.5*	*2*
Wage cut in 2012 (average wage cut in %)	2.5	.	1.0	.	.	1.0	.	.	2.5	2.5	.	1.0	.	.	.	1.4	1.4	.	2.5	.	1.0	*1.4*	*2*
Wage cut in 2013 (average wage cut in %)	5.0	.	2.0	10.0	.	5.0	10.0	2.0	.	.	.	2.9	.	10.0	8.6	2.0	5.9	.	.	2.9	10.0	*5.9*	*3*
Wage cut in 2010 (% workers affected)	83.5	1.0	34.0	23.2	.	7.4	90.0	15.6	70.6	.	9.6	36.5	100.0	65.2	70.6	27.2	53.8	40.3	50.5	35.9	65.3	*48.9*	*10*
Wage cut in 2011 (% workers affected)	10.0	.	7.0	.	.	7.0	.	.	10.0	.	.	7.0	.	10.0	7.0	10.0	7.5	.	10.0	.	7.0	*7.5*	*2*
Wage cut in 2012 (% workers affected)	25.0	.	5.0	.	.	5.0	.	.	25.0	25.0	.	5.0	.	.	.	10.7	10.7	.	25.0	.	5.0	*10.7*	*2*
Wage cut in 2013 (% workers affected)	26.7	.	75.0	10.0	100.0	26.7	10.0	75.0	100.0	.	.	61.0	.	36.4	14.8	82.4	48.6	.	.	70.0	10.0	*48.6*	*4*
Neither freeze nor cut in 2010-13	0.954	0.972	0.968	0.907	0.940	0.943	0.934	0.943	0.943	0.989	0.872	0.955	0.948	0.934	0.929	0.956	0.941	0.953	0.912	0.938	0.943	*0.941*	*747*
Neither freeze nor cut in 2010	0.976	0.977	0.977	0.931	1.000	0.963	0.952	0.960	0.961	1.000	0.922	0.962	0.970	0.952	0.949	0.970	0.961	0.953	0.945	0.964	0.958	*0.959*	*743*
Neither freeze nor cut in 2011	0.964	0.977	0.972	0.925	1.000	0.952	0.948	0.953	0.961	1.000	0.898	0.958	0.968	0.952	0.943	0.965	0.954	0.953	0.945	0.955	0.953	*0.953*	*744*
Neither freeze nor cut in 2012	0.966	0.978	0.977	0.921	1.000	0.955	0.942	0.960	0.955	0.993	0.901	0.962	0.959	0.952	0.942	0.968	0.954	0.953	0.925	0.958	0.953	*0.953*	*746*
Neither freeze nor cut in 2013	0.976	0.972	0.972	0.923	0.940	0.961	0.949	0.950	0.950	0.996	0.914	0.959	0.961	0.934	0.944	0.962	0.954	0.953	0.932	0.953	0.954	*0.952*	*747*
Question 48 *(cuts of performance-related pay)*																							
Cut of performance-related pay in 2010-2013	0.124	0.135	0.126	0.108	0.242	0.083	0.107	0.151	0.145	0.094	0.099	0.152	0.084	0.145	0.131	0.111	0.115	0.165	0.148	0.185	0.099	*0.122*	*754*

Weighted results (basic sampling weights).

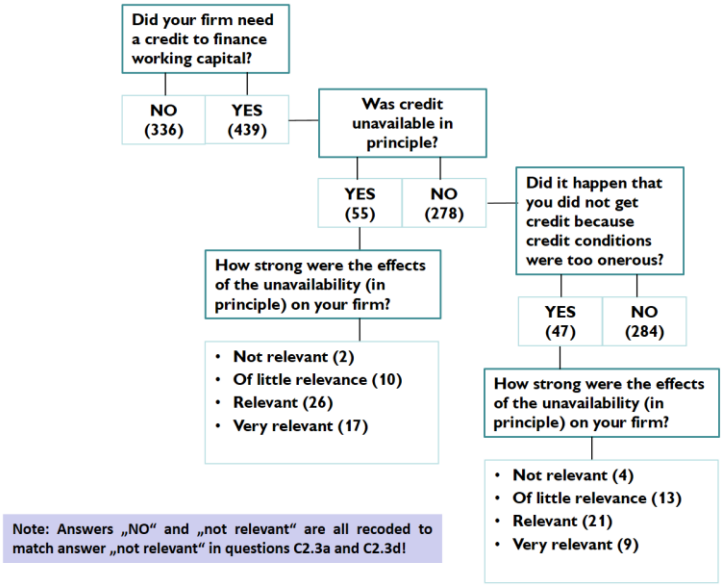
Appendix 2: Deviations of the Austrian Questionnaire from the Common Template

In almost all details the Austrian version of the questionnaire followed the structure of the common template closely. There were, however, two exceptions: first, following the advice of WIFO (the conductor of the survey), the questions on credit constraints (questions set C2.3 in the common template) were broken into smaller pieces, in order to – so to speak - put more structure on the reduced form of the questions in the template. Second, question set C3.5 (on potential obstacles for new hires), was preceded by a filter question. There were further minor differences which are mentioned here as well.

A2.1 The Questions on Credit Constraints (Question Set 2.3)

Question set C2.3 in the template asked firms whether credit was available or whether credit was available in principle, but credit conditions were too onerous. These questions were asked for three types of credits (financing working capital, new investment or to refinance debt). So for all three credit types there were six questions (C2.3a–C2.3f). In the Austrian questionnaire there were five questions for each type of credit (15 questions altogether: questions 7–21). The structure of the questions is explained in the figure A2.1 for the example of credits to finance working capital. As mentioned in section 3.1.1, the results to these questions are in line with other surveys on credit constraints. So, the altered structure has probably not affected the results.

Figure A2.1: The Structure of the Questions on Constraints of Credit for Financing Working Capital



A2.2 The Question on Obstacles For New Hires (Question Set C3.5)

In contrast to the template this question was preceded by a filter question asking firms whether they would like to hire workers in permanent open-ended contracts at all (question 32 in the Austrian questionnaire). When the firm answered "No" (which about two thirds of all firms did), the subsequent answering options were all coded as "not relevant". Only when the firm had answered "yes" it could indicate which of the given reasons was "not relevant", "of little relevance", "relevant", or "very relevant". Compared to other countries, this probably led to a relatively higher share of answers in the "not relevant" category. Table A2.1 provides a country comparison of the share of "not relevant" answers. The corresponding share is highest in Austria in all subquestions of question set C3.5 (with the

exception of the "other reasons" category) and in many cases considerably higher than the second-highest value (which interestingly, is Hungary in most cases). It is possible that the filter question biased the answers towards "not relevant" in this question set.

Table A2.1 Shares of "Not Relevant" in Question Set C3.5 - Country Comparison

	Uncertainty about economic conditions	Insuff. availability of labor with requ. skills	Access to finance	Firing costs	Hiring costs	High payroll taxes	High wages	Risks that labour laws are changed	Costs of other inputs complementary to labor	Other reasons
AT	0.709	0.676	0.826	0.741	0.766	0.689	0.687	0.727	0.785	0.920
Weighted mean of all countries	0.167	0.212	0.409	0.384	0.343	0.210	0.202	0.279	0.334	0.651
Simple mean of all country results	0.166	0.232	0.339	0.299	0.300	0.186	0.205	0.252	0.283	0.452
Maximum of all countries (except AT)	0.344 (MT)	0.609 (HU)	0.697 (HU)	0.654 (HU)	0.666 (CY)	0.457 (HU)	0.509 (HU)	0.557 (HU)	0.618 (HU)	0.968 (HU)

Weighted results (basic sampling weights).

A2.3 Further Differences

Question set 23 contained a further category "fringe benefits" (which was not in question set C2.5) because many fringe benefits often cannot be adjusted as easily as bonus payments etc. (often they are enshrined in contracts with the works council). Furthermore, question set 31 (the question on whether actions to adjust employment and wages became more or less difficult) contained in contrast to question set C3.4 a category "don't know" (which received few answers and which in turn were recoded to missing).

Question set C4.7 on wage freezes and cuts were split into four smaller questions (no. 43–46). Finally, as already mentioned, the Austrian questionnaire contained two questions on possible cuts in flexible wage components (questions 47 and 48) which were not in the common template.

Appendix 3: The Austrian WDN 3 Questionnaire

(An English translation of the original questionnaire.)

Section A – General Information about Your Firm

1 In which year was your enterprise founded?

Independent of changes in the legal form.

Year _____

2 As regards the number of establishments, how was your firm structured at the end of 2013?

- ☐ Single-establishment firm
- ☐ Multi-establishment firm

3 How was the ownership status at the end of 2013?

If your firm is a subsidiary of a multinational company please answer the question according to the location of the superordinated company.

- ☐ Entirely / mainly domestic ownership.
- ☐ Entirely / mainly foreign ownership.
- ☐ Domestic and foreign in equal parts.

4 At the end of 2013, was your firm part of an international company.

- ☐ Yes, the parent company.
- ☐ Yes, subsidiary / affiliate.
- ☐ No.

Section B – Changes in the Economic Environment

5 How did the following factors affect your firm's activity in the period from 2010 to 2013?

Please choose one option for each line. In the case of opposing developments between 2010 and 2013, e. g. an increase of demand followed by decrease, refer in your answer to that change that was most relevant for your firm.

	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase
The level of demand for your products / services	☐	☐	☐	☐	☐
Volatility / uncertainty of demand for your products / services	☐	☐	☐	☐	☐
Access to external financing through the usual financial channels	☐	☐	☐	☐	☐
Customers' ability to pay and meet contractual arrangements	☐	☐	☐	☐	☐
Availability of supplies from your usual suppliers	☐	☐	☐	☐	☐

6 For those factors in question 5, for which you indicated a strong increase or a strong decrease: did the effects last shorter than a year, between one and two years or longer than two years?

Please choose one option for each line if applicable.

	Shorter than one year	one to two years	longer than two years
The level of demand for your products / services	☐	☐	☐
Volatility / uncertainty of demand for your products / services	☐	☐	☐
Access to external financing through the usual financial channels	☐	☐	☐
Customers' ability to pay and meet contractual arrangements	☐	☐	☐
Availability of supplies from your usual suppliers	☐	☐	☐

7 Did your firm have at least once in 2010-2013 the need for a credit to finance working capital, independently of whether your firm actually was granted the credit or not?

Please consider not only bank credits, but also credits by suppliers and loans by other persons or institutions.

- ☐ Yes
- ☐ No → **Please go to question no. 12.**

8 Did it ever happen to your firm in 2010-2013 that you did not get a necessary credit to finance working capital because it was unavailable in principle?

- ☐ Yes
- ☐ No → **Please go to question no. 10.**

9 How relevant were the effects of the rejection of credit for working capital for your firm?

- ☐ Very relevant.
- ☐ Relevant.
- ☐ Of little relevance.
- ☐ Not relevant.

10 Did it ever happen to your firm in 2010-2013 that you did not get a necessary credit to finance working capital because credit conditions were too onerous?

- ☐ Yes
- ☐ No → **Please go to question no. 12.**

11 How relevant were the effects for your firm because credit conditions to finance working capital were too onerous?

- ☐ Very relevant.
- ☐ Relevant.
- ☐ Of little relevance.
- ☐ Not relevant.

12 Did your firm have at least once in 2010-2013 the need for a credit to finance new investment, independently of whether your firm actually was granted the credit or not?

- ☐ Yes
- ☐ No → **Please go to question no. 17.**

13 Did it ever happen to your firm in 2010-2013 that you did not get a necessary credit to finance new investment because it was unavailable in principle?

- ☐ Yes
- ☐ No → **Please go to question no. 15.**

14 How relevant were the effects of the rejection of credit for new investment for your firm?

- ☐ Very relevant.
- ☐ Relevant.
- ☐ Of little relevance.
- ☐ Not relevant.

15 Did it ever happen to your firm in 2010-2013 that you did not get a necessary credit to finance new investment because credit conditions were too onerous?

- ☐ Yes
- ☐ No → **Please go to question no. 17.**

16 How relevant were the effects for your firm because credit conditions to finance new investment were too onerous?

- ☐ Very relevant.
- ☐ Relevant.
- ☐ Of little relevance.
- ☐ Not relevant.

17 Did your firm have at least once in 2010-2013 the need for a credit to refinance debt, independently of whether your firm actually was granted the credit or not?

- ☐ Yes
- ☐ No → **Please go to question no. 22.**

18 Did it ever happen to your firm in 2010-2013 that you did not get a necessary credit to refinance debt because it was unavailable in principle?

- ☐ Yes
- ☐ No → **Please go to question no. 20.**

19 How relevant were the effects of the rejection of credit for refinancing debt for your firm?

- ☐ Very relevant.
- ☐ Relevant.
- ☐ Of little relevance.
- ☐ Not relevant.

20 Did it ever happen to your firm in 2010-2013 that you did not get a necessary credit to refinance debt because credit conditions were too onerous?

- ☐ Yes
- ☐ No → **Please go to question no. 22.**

21 How relevant were the effects for your firm because credit conditions to refinance debt were too onerous?

- ☐ Very relevant.
- ☐ Relevant.
- ☐ Of little relevance.
- ☐ Not relevant.

22 How did these components of total costs evolve during 2010-2013? (At current prices in euro.)

Please choose one option for each line.

	Strong De-crease	Mode-rate de-crease	Un-chan-ged	Mode-rate in-crease	Strong in-crease
Total costs	☐	☐	☐	☐	☐
Labor costs*)	☐	☐	☐	☐	☐
Financing costs	☐	☐	☐	☐	☐
Costs of supplies	☐	☐	☐	☐	☐
Other costs	☐	☐	☐	☐	☐

(please specify, if relevant):

*) Costs for blue- and white collar workers respectively and apprentices (including employer contributions to social security, other payroll taxes, payments to pension funds, severance payments, other social expenses / fringe benefits for your workers) and costs for agency workers and other quasi-employees (freelancers, trainees, consultants etc.).

23 Please indicate how each one of the components of labor costs listed below has changed during 2010-2013.

Please choose one option per line.

	Strong De-crease	Mode-rate de-crease	Un-chan-ged	Mode-rate in-crease	Strong in-crease	Not appli-cable
Base wages, or piece work rates and commissions	☐	☐	☐	☐	☐	☐
Other flexible wage components (dependent on individual or firm performance) such as bonus payments	☐	☐	☐	☐	☐	☐
Number of permanent employees	☐	☐	☐	☐	☐	☐
Number of temporary and fixed-term employees	☐	☐	☐	☐	☐	☐
Number of agency workers and others (freelance work etc.)	☐	☐	☐	☐	☐	☐
Working hours per employee	☐	☐	☐	☐	☐	☐
Fringe benefits	☐	☐	☐	☐	☐	☐
Others	☐	☐	☐	☐	☐	☐

(please incidate, if relevant):

24 How did prices and demand for your main product evolve during 2010-2013?

The main product may be physical product or a service. If your firms has no "main" product, please refer to an important or a typical product. Please choose one option in each line.

	Strong De-crease	Mode-rate de-crease	Un-chan-ged	Mode-rate in-crease	Strong in-crease	Not appli-cable
Domestic demand for your main product / service	☐	☐	☐	☐	☐	☐
Foreign demand for your main product / service	☐	☐	☐	☐	☐	☐
Price of your main product in domestic markets	☐	☐	☐	☐	☐	☐
Price of your main product in foreign markets	☐	☐	☐	☐	☐	☐

Section C – Labor Force Adjustments

25 How many blue- and white collar workers and apprentices did your firm have at the end of 2013 (or at the balance-sheet date in that year)?

Including workers in minor jobs ("geringfügige Beschäftigung"), but without agency workers, freelancers etc.

	Number of persons
Blue/white-collar workers and apprentices	
Of which:	
Permanent full-time	
Permanent part-time (including "geringfügige Beschäftigte")	
Fixed-term workers (including apprentices)	

26 How were your firm's employees approximately distributed by occupational groups or tenure at the end of 2013?

	Number of persons
Higher skilled non-manual workers, i. e. managers or white-collar workers whose job normally requires higher secondary education ("Matura") or a university degree.	
Other non-manual workers	
Skilled workers / craftsmen	
Unskilled workers	

27 How were your workers distributed by tenure at the end of 2013?

	Number of persons
Less than 1 year	
Between 1 and 5 years	
Between 5 and 10 years	
More than 10 years	

28 How many agency workers and other workers were employed in your firm at the end of 2013?

Other workers: freelancers, trainees, consultants and other "quasi-employees".

_____ No. of persons.

29 During 2010-2013 did you need to significantly reduce your labor input or to alter its composition ?

Examples: Layoffs, a reduction of the number of agency workers, a reduction of working time per employee (including a reduction of overtime), Early retirement.

☐ Yes
☐ No → **Please go to question 31.**

30 If yes, which of the following measures did you use to reduce your labor input or alter its composition when it was most urgent?

Please choose one option for each line.

	Not at all	Margi-nally	Mode-rately	Strongly
Collective layoffs*)	☐	☐	☐	☐
Individual layoff(s)	☐	☐	☐	☐
Temporary layoffs	☐	☐	☐	☐
Subsidized short-term work	☐	☐	☐	☐
Other reductions of working time (including reductions of overtime)	☐	☐	☐	☐
Non-renewal of temporary contracts at expiration	☐	☐	☐	☐
Early retirement	☐	☐	☐	☐
Freeze or reduction of new hires	☐	☐	☐	☐
Reduction of agency and other workers	☐	☐	☐	☐

*) If your firm had employed more than 20 workers before a possible collective layoff, please stick to the definition of the public employment service (AMS) of "mass layoffs". A mass layoff occurs when

- in a firm with more than 20 and less than 100 workers at least 5 workers are laid off at the same time,
- in a firm with at least 100 and less than 600 workers at least 5 percent of all workers are laid off at the same time or
- in a firm with at least 600 workers 30 workers or more are laid off at the same time..

31 Have any of the following actions become more or less difficult, compared to the situation in 2010?

Please choose one option for each line.

	Much less dif-ficult	Less dif-ficult	Un-changed	More dif-ficult	More difficult	Don't know
Collective layoffs	☐	☐	☐	☐	☐	☐
Individual layoffs	☐	☐	☐	☐	☐	☐
Dismissals for disciplinary reasons	☐	☐	☐	☐	☐	☐
Temporary layoffs for economic reasons	☐	☐	☐	☐	☐	☐
New hires	☐	☐	☐	☐	☐	☐
To adjust working hours	☐	☐	☐	☐	☐	☐
To move employees to positions in other locations	☐	☐	☐	☐	☐	☐
To move employees across different job positions	☐	☐	☐	☐	☐	☐
To adjust wages of incumbent workers	☐	☐	☐	☐	☐	☐
To lower wages for new hires	☐	☐	☐	☐	☐	☐

32 Does your firm, in principle, has a need to hire additional workers in permanent, open-ended contracts?

☐ Yes
☐ No → **Please go to question 34.**

33 How relevant is each of the following factors as obstacles in hiring new workers with a permanent, open ended contract?

Please choose one option for each line.

	Not relevant	Of little relevance	Important	Very important
Uncertainty about future economic conditions	☐	☐	☐	☐
Difficulty to find workers with the required skills	☐	☐	☐	☐
Access to finance	☐	☐	☐	☐
Firing costs	☐	☐	☐	☐
Hiring costs	☐	☐	☐	☐
High payroll taxes and social security contributions	☐	☐	☐	☐
High wages	☐	☐	☐	☐
Uncertainty about changes in labor law	☐	☐	☐	☐
High costs of other production factors	☐	☐	☐	☐
Other factors	☐	☐	☐	☐

(please specify, if relevant):

_____

Section D – Flexibility of Wages and Salaries

In answering the questions in this section please refer to blue- and white collar workers and apprentices.

34 What percentage of your firm's total costs was due to labor costs in 2013?

Labor costs include gross wages and salaries, employer contributions to social security, other payroll taxes, payments into pension funds, expenses for severance payments and costs for fringe benefits.

_____ %

35 What percentage of your total wage bill in 2013 was related to flexible individual or company performance related bonuses and benefits?

_____ %

36 In 2013, was there a collective agreement (at the sectoral level or at the firm level) and / or a company agreement ("Betriebsvereinbarung") relevant for your firm?

A collective agreement is also relevant if actual pay in your firm exceeds the minimum wages/salaries specified therein. Company agreements are only relevant, if they specify higher wages/salaries than foreseen in the relevant collective agreements.

Both "Yes" answers are possible.

- ☐ Yes, one or more sectoral collective agreements were relevant.
- ☐ Yes, there was a collective agreement at the firm-level or a company agreement ("Betriebsvereinbarung") determining pay in the firm.
- ☐ No there was neither a sectoral collective agreement nor an agreement at the firm level. → **Please go to question 39.**

37 What was the proportion of your employees covered in 2013 by any collective or company agreement?

_____ %

38 How often does the collective pay agreement applied at you firm typically change?

- ☐ More than once a year.
- ☐ Once a year.
- ☐ Between one and two years.
- ☐ Every two years.
- ☐ Less frequently than once every two years.

39 Did your firm adapt base wages automatically to inflation ("indexation") before 2010?

In Austria, there is no statutory adjustment of nominal wages/salaries to consumer price inflation. Any such adjustment must therefore be voluntary. Note that the regular adjustment of wages/salaries by collective agreements are not to regarded as an indexation mechanism.

Base wages are basic salaries, hourly wages and commissions.

- ☐ Yes
- ☐ Automatic adjustments are foreseen but inflation was too low that they came into effect.
- ☐ No, before 2010, there was no automatic adjustment of wages/salaries to inflation in our firm.

40 Did your firm adapt base wages automatically to inflation ("indexation") in 2010-2013?

- ☐ Yes
- ☐ Automatic adjustments are foreseen but inflation was too low that they came into effect.
- ☐ No, in 2010-2013, there was no automatic adjustment of wages/salaries to inflation in our firm.

41 How often were base wages of an employee belonging to the main occupational group in your firm typically adjusted before 2010?

Please refer to the worker group with the largest share in question 26 as your main occupational group.

- ☐ More than once a year.
- ☐ Once a year.
- ☐ Between one and two years.
- ☐ Every two years.
- ☐ Less frequently than once every two years.
- ☐ Never / not applicable.

42 How often were base wages of an employee belonging to the main occupational group in your firm typically adjusted in 2010-2013?

- ☐ More than once a year.
- ☐ Once a year.
- ☐ Between one and two years.
- ☐ Every two years.
- ☐ Less frequently than once every two years.
- ☐ Never / not applicable.

43 Did you ever, in the period 2010-2013, freeze base nominal wages / salaries for at least a part of your workforce?

- ☐ Yes
- ☐ No → **Please go to question 45.**

44 If yes, in which years was there such a "zero wage round" and how large was the share of workers affected in your total workforce?

- ☐ 2010 Workforce share _____%
- ☐ 2011 Workforce share _____%
- ☐ 2012 Workforce share _____%
- ☐ 2013 Workforce share _____%

45 Did you ever, in the period 2010-2013, cut base nominal wages / salaries for at least a part of your workforce?

- ☐ Yes
- ☐ No → **Please go to question 47.**

46 If yes, in which years was there such a cut, how large was the share of workers affected in your total workforce and how large was the average ?

- ☐ 2010 Workforce share _____%
  Average wage cut _____ %
- ☐ 2011 Workforce share _____%
  Average wage cut _____ %
- ☐ 2012 Workforce share _____%
  Average wage cut _____ %
- ☐ 2013 Workforce share _____%
  Average wage cut _____ %

47 Did you ever, in the period 2010-2013, cut flexible nominal pay components (individual or company performance related bonuses and benefits)?

- ☐ Yes
- ☐ No

48 If yes, in which years was there such a cut, how large was the share of workers affected in your total workforce?

- ☐ 2010 Workforce share _____%
- ☐ 2011 Workforce share _____%
- ☐ 2012 Workforce share _____%
- ☐ 2013 Workforce share _____%