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# Wage Dynamics Network: Wage and Price Setting Practices of Cypriot Companies During the Period 2010-2013

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April 2016

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# Wage and Price Setting Practices of Cypriot Companies During the Period 2010-2013

Charalambos P Charalambous\*, Marios C Polemidiotis\*, and Angelos Y Roussos\*

## April 2016

## Abstract

In the context of its participation in the ESCB Wage Dynamics Network (WDN), the Central Bank of Cyprus (CBC) conducted a survey of the wage and price setting policies of domestic firms. Companies were asked to respond on the impact of various shocks related to the economic environment over the period 2010-2013, leading to the implementation of labour cost reduction strategies, including wage-setting changes. The major shocks that affected companies' activities negatively during 2010-2013 related primarily to changes in the level and volatility of demand and the ability of customers to pay and meet their contractual obligations. The survey results point both to a reduction in demand as well as to a shift of the latter from smaller to larger firms. Consequently, micro and very small firms reduced prices and implemented cuts in labour costs to a greater extent than larger ones in order to remain competitive. Also, companies initially responded by cutting prices more than wages until 2011. As of 2012, given the challenging economic environment, firms increased the average wage cut, almost matching the cut in prices. The general conclusion that emerges is that the private sector was able to adapt well to the unprecedented decisions of the Eurogroup in March 2013.

Keywords: wages, labour, prices, crisis.

JEL Classification: D21; E30; J21; J30.

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## **Executive Summary**

The Wage Dynamics Network (WDN) is a research network consisting of economists from the European Central Bank (ECB) and the national central banks (NCBs) of the EU, which studies the features and sources of wage and labour cost dynamics that are most relevant for monetary policy in Europe. The work of the network is intended to contribute to a better understanding of the monetary transmission mechanism, especially in euro area member states. Specifically, how and to what extent changes in the policy rate are transmitted to the rates households and businesses are facing in the euro area. This is of particular interest to the CBC, given the bail-in in March 2013 and the subsequent impact on SMEs in Cyprus. The third wave of WDN (henceforth WDN3) carries on from the previous wave conducted in 2009, again via the use of a harmonised questionnaire across a large number of European Union NCBs. Most of the questions cover the period 2010-2013.

The Cypriot survey was conducted on the basis of a gross population of 9.590 firms covering 145.021 employees, consisting of companies with three or more employees in selected sectoral groupings. The gross (contacted firms) and net (realised responses) samples amounted to 1.657 and 182 firms, respectively, corresponding a response rate close to 11%. The random sample was selected from the Business Register of the Cyprus Statistical Service, which was updated in summer 2014, and did not utilise a panel dimension on the basis of the WDN2 wave participants.

Companies were asked to respond on the impact of various demand and finance shocks related to the economic environment during the period 2010-2013. As a consequence of these shocks, a significant proportion of companies initially proceeded with price cuts, which were subsequently followed by labour cost reduction strategies and wage-setting changes.

Focusing on the major shocks that affected company activity negatively during 2010-2013, these related primarily to changes in the level of demand, changes in the volatility / uncertainty of demand and the ability of customers to pay and meet their contractual obligations. Further analysis of these shocks in terms of firm size shows that there has been a structural shift in demand from small size firms to larger ones, whereas on a sectoral level, the construction sector bore the brunt of the negative impact across all types of shocks. Assessing the perception of firms as regards the duration of shocks which affected them strongly, only a few firms consider these shocks to be transitory and most of them consider the shocks to have a medium- to long-term effect. Regarding financing costs, these appeared to be most difficult cost category to reduce and also with the relatively most long-lasting impact.

As regards shocks related to financing conditions, in particular the availability of credit to finance working capital, new investment or debt restructuring, it emerges that financial constraints were not relevant for a relatively large number of firms under these unprecedented circumstances (40% of respondents). This result could be explained as follows. First, the survey question relates to the availability of all kinds of credit, not only bank credit. Given that most companies are SMEs and highly leveraged, it might be the case that adverse financial conditions for some firms (in particular larger firms) was not an issue due to availability of inward funds, possibly due to revenues emanating from a higher sales volume given price competition as a result of the shift in demand from small to larger firms. Second, the aforementioned high percentage includes firms that applied for a loan but were not granted one as well as firms that did not seek a loan. This view is supported by the results of the CBC Bank Lending Survey (BLS) covering the period under consideration, pointing to continuous tight credit conditions and low loan demand. A more in-depth analysis of the micro data indicates that the construction and business services sectors were most significantly affected by financing constraints as well as micro and very small businesses (3-4 and 5-19 employees, respectively). Overall, and given the decrease in demand as well as their relatively highly leveraged position, it appears that a significant proportion of firms relied, at least over the period under consideration, on availability of inward funds.

If we look at price cuts as the initial response to the crisis, there was indeed a rapid increase in the number of companies lowering prices over the period 2010-2013, with the share of respondent firms reducing prices increasing significantly from 17,7% in 2010 to 52,6% in 2013, in line with developments

in economic activity. The bulk of this increase was due to the decline in companies that maintained their prices unchanged, with the relevant share declining from around 65,8% in 2010 to about 36,7% in 2013.

In line with the rapid decline in prices, there was a speedy adjustment of wages in response to the contraction in demand. Companies initially responded by cutting prices more than wages (at least until 2011). As from 2012, given the challenging economic environment, firms increased the average wage reduction, broadly matching the cut in prices. In terms of firm size, very small firms reduced prices by a greater extent than larger ones in order to remain competitive.

Analysing labour cost reduction strategies (including wage-setting changes) in more detail, a significant proportion of firms reported that they decreased total costs mainly by reducing labour costs. Additionally, this method of adjustment was more widely used by smaller firms in order to remain competitive. Firms also achieved labour cost savings by changing their labour force composition. In comparison with the second wave, the results of WDN3 point to a shift from higher skilled to lower skilled workers.

In terms of the sub-components of the labour cost reduction, three key drivers were identified: reduction in base wages, flexible wage components and number of permanent employees. The decrease in the workforce is evident by the decline in the average company size (the issue of survival bias should be noted) from about 22 employees in 2010 to 19 in 2013 as per the WDN3 results. In terms of nationality, WDN3 data point to the exodus of EU nationals from the Cypriot labour market, a finding that is consistent with LFS data.

Focusing on base wages as a mechanism for curbing total costs, there has been a significant increase in the number of companies cutting base wages over time (from 2,8% in 2010 to 35,8% in 2013). At the same time, there has been a significant decrease in the number of companies granting wage increases (from 33,7% in 2010 down to 7% in 2013). Additionally, other than the increase in the number of companies cutting wages, there has been an increase in the percentage of workers affected by this policy (from 62,6% in 2010 up to 84% in 2013). It should also be noted that among those companies that have pursued a policy of freezing wages (60,9% of respondents in 2013), this policy has been applied almost universally across all workers. Overall, the WDN3 micro data corroborate national accounts data, which show that cost adjustments during the period under consideration took place through both wages and employment.

To sum up, the key findings of the survey are as follows: First, the main shock to firms' activity related to changes in the level and volatility of demand. As a response to the crisis, firms proceeded with various labour cost reduction strategies. Second, over the period 2010-2013, there was a shift in demand from smaller to larger firms, despite the fact that, on average, small firms responded by decreasing prices more than larger firms. Third, the impact due to financing conditions appeared relatively limited over the entire sample. However, financial constraints proved important for smaller firms in the construction and market services sectors. Finally, it emerges that, in general, companies initially responded by cutting prices more than wages. In 2012, they increased the average wage cut, broadly matching the cut in prices During the period 2010-2013, there was an increase in the number of companies implementing both wage and price reductions as well as in the magnitude of the average wage and price cuts.

The WDN3 results broadly demonstrate the flexibility of the Cyprus economy as well as the rapid response by businesses to shocks via cuts in wages and prices, especially following the restructuring and substantial downsizing of the banking sector and the bail-in of uninsured depositors following the March 2013 events. This rapid adjustment assisted businesses in terms of financing their activities via own funds in order to minimise the adverse effects of the tightening in bank credit conditions. Generally, it emerges that the private sector was in a position to adapt well to the unprecedented decisions of the Eurogroup in March 2013, through the speedy and significant adjustment of both wages and prices via this process of internal devaluation, despite the immediate social cost. This adjustment process helped, at least partially, towards the correction of macroeconomic imbalances.

## Section 1

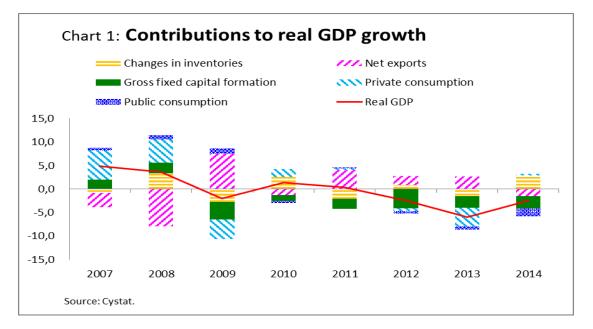
## Introduction

## 1.1 Background to the WDN

In the context of its participation in the Wage Dynamics Network (WDN), which comprises of labour market experts across European Union NCBs, the Central Bank of Cyprus (CBC) conducted a survey of the wage and price setting policies of domestic firms. Since the inception of the WDN, three waves have been conducted overall. This survey (issued in the context of the third wave of the WDN, henceforth WDN3) constitutes a follow up of the survey conducted in 2009 again in the context of a broad effort by a large number of EU Members States via the use of a common questionnaire (see Appendix C). It aims to assess the reaction of firms to shocks that have taken place in the last few years (2010-2013), and ultimately gauge the impact on the labour market.

#### 1.2 Background Information on Macro / Labour Market Performance during the Crisis

The global economic crisis took its toll on the Cyprus economy, as GDP contracted in 2009 for the first time since the Turkish invasion in 1974, on account of the significant contraction in private consumption and investment (**Chart 1**). Prior to the 2009 recession, Cyprus had been enjoying a sustained real GDP growth, averaging 4% per annum. Following a modest recovery in 2010 and 2011, Cypriot GDP contracted again with the decline reaching 5,9% in 2013. In March 2013, an agreement on an economic adjustment programme for Cyprus was reached, aiming to address short- and medium-term financial, fiscal and structural challenges facing Cyprus. The programme included the restructuring and substantial downsizing of the banking sector and extensive bail-in of uninsured depositors as well as the reinforcement of efforts on fiscal consolidation, structural reforms and privatisation of state-owned assets.

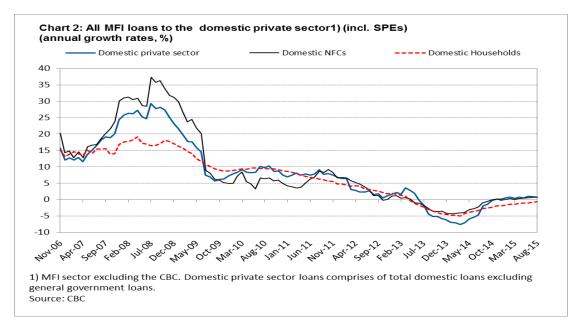


The bail-in of uninsured depositors caused a loss of wealth, curbing private consumption and business investment. This, compounded by the impact of fiscal consolidation already

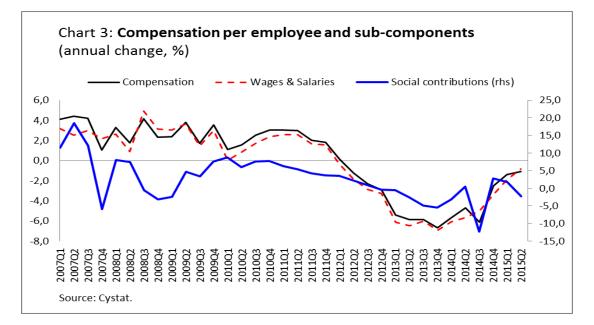
underway as from 2011, along with the new measures agreed in the context of the March 2013 Memorandum of Understanding (MoU), resulted in a sharp fall in domestic demand in 2013. In 2014, the recession moderated as GDP deteriorated by only 2,5%, a much better performance than anticipated (**Chart 1**, p. 7). This could be explained to a large extent by households' efforts to smoothen their consumption using their savings, which are still higher than their loans. It should be noted that positive growth of 0,2% on a year-on-year basis was recorded in 2015Q1, after 14 consecutive quarters of negative growth. Growth accelerated in the second quarter reaching 1,2% on a year-on-year basis. Overall, year-on-year growth of 0,7% was recorded over the first half of 2015.

Credit developments also acted as a drag on growth during the crisis period. As regards deposits, these exhibited an upward trend especially following the introduction of the euro in 2008. Since the March 2013 events, deposits have recorded consecutive sizeable negative growth rates, reflecting *inter alia* the severe loss of confidence in the Cypriot banking system as a result of the Eurogroup decision to bail-in uninsured depositors, as well as the use of part of domestic private sector deposits for the repayment of loans and the support of their consumption needs. In terms of credit, following its strong growth observed over the period 2006-2008, domestic private sector credit growth exhibited a continuous downward trend since 2009 (**Chart 2**). Furthermore, since May 2013, domestic private sector loans have exhibited negative annual growth rates, mainly reflecting the continuous contraction in economic activity and hence low credit demand, the increasing stock of non-performing loans and in consequence, the ongoing efforts of both domestic banks and the non-financial private sector to deleverage.

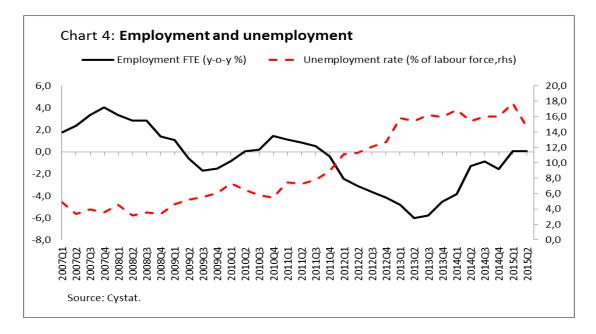
On the positive side, it is important to note that a significant reduction in the rate of deposit outflows has been recorded as of November 2014, which could be attributed to the positive results from the Asset Quality Review (AQR) and stress test exercises for the systemic local banks. Similarly, positive factors such as the various structural reforms that took place in the banking sector following the signing of the Cyprus MoU, in conjunction with the significant reduction in both deposit and lending money interest rates and the availability of EIB and EBRD funds to domestic SMEs, have contributed to loans to non-financial corporations (NFCs) exhibiting positive annual growth rates since April 2015, with the growth in the overall domestic private sector loans also turning positive in August 2015.



As regards wages, the sharp adjustment of compensation per employee (**Chart 3**) is noteworthy, reaching -5,9% in 2013 and -4,7% in 2014. This adjustment process is ongoing, with the year-on-year decline in average compensation per employee reaching 1,0% over the first half of 2015. This is due to the change in the composition of the public sector workforce, where there was a decrease in the number of highly-paid employees, consequently impacting the average salary and gratuity, as well as due to general reductions in the private sector.



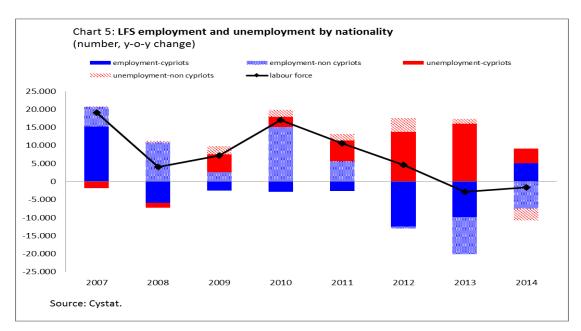
Unemployment reached a trough in 2008, falling to 3,7% of the labour force, before embarking upon an upward path as of 2009 and reaching 15,9% in 2013 (**Chart 4**, p. 10). Employment recorded negative growth rates as from 2011Q4 (**Chart 4**, p. 10). The adverse labour market developments reflected the effects of the crisis and the negative external environment, impacting on domestic demand and leading to the slowdown of economic activity and to a loss of jobs. Signs of a stabilising labour market emerged in 2014, with the unemployment rate recording 16,1% of the labour force (**Chart 4**, p. 10). Employment continued to contract, albeit at a smaller pace, with the annual decline reaching 2,0% in 2014 compared with 5,3% in 2013 (**Chart 4**, p. 10). Over the first half of 2015, a marginal growth of 0,1% in employment was recorded. At the same time, the unemployment rate rose to an unprecedented 17,7% in 2015Q1, driven in part, by seasonal factors. Developments in the second quarter were more favourable, with the unemployment rate dropping to 14,7%. Overall, unemployment stood at 16,2% over the first half of 2015, thus pointing to a correction process that is underway.

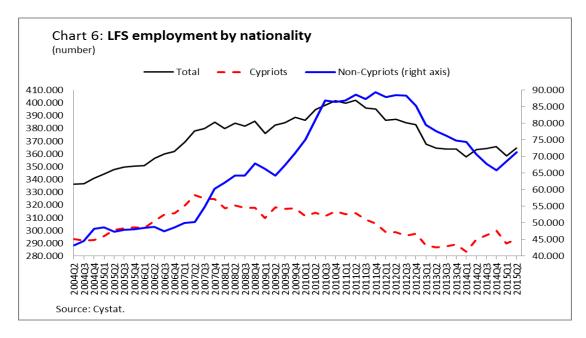


# **1.3** Main Institutional Characteristics of the Cypriot Labour Market Prior to Memorandum of Understanding

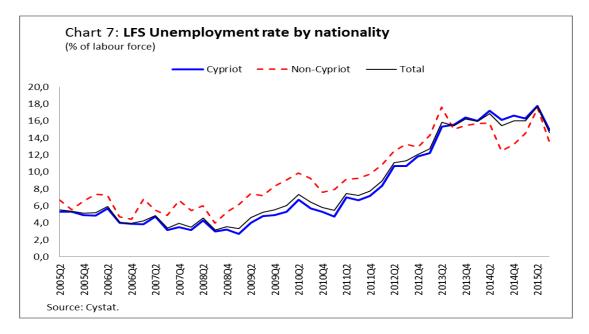
Over 2007-2010, the labour force grew by 7,2% (equivalent to about 28,000 individuals) according to the Labour Force Survey (LFS), with the annual inflow to the labour force peaking in 2010 (around 17,000 individuals) (**Chart 5**). The increase in the labour force was largely driven by the growth in foreign labour (58,0%, equivalent to about 33,000 individuals over the aforementioned period) (**Chart 5**). As such, the share of non-Cypriots in the labour force showed a marked upward trend, reaching 21,4% in 2010 up from 14,5% in 2007. The number of non-Cypriots peaked in 2012 and reached about 101,000.

As regards 2011 and 2012, the labour force continued to grow, albeit at a decelerating pace, with a decline of 0,6% observed in 2013 (**Chart 5**). In 2014, the labour force continued to decline by about 0,4% (**Chart 5**).





The rise in the share of non-Cypriots over the period 2007-2012 was driven by the rise in EU workers (**Chart 6**), supported by the accession of Romania and Bulgaria in that year. The inflow of foreign workers helped the Cyprus economy in the period before the crisis, as job vacancies that were intended mostly for unskilled labour and which were unattractive to Cypriot workers, were filled, while also contributing to the containment of labour costs.



Given the rising unemployment among Cypriots, and in particular following the March 2013 events (**Chart 7**), non-Cypriot workers appear to compete with the domestic labour force, mostly for low-skilled jobs.

Another institutional feature of the Cypriot labour market relates to the presence of collective agreements, reached in the context of discussions between the representatives of employees and employers, impacting on wage developments. Trade union membership is associated with collective bargaining as the latter is an incentive for joining a trade union, although union

membership is not a prerequisite for being covered by collective agreements. The largest trade unions in Cyprus are the Pancyprian Federation of Labour (PEO), the Cyprus Workers Confederation (SEK), the Pancyprian Public Employees Trade Union (PASYDY) and the Cyprus Union of Bank Employees (ETYK). In the public sector, all employees are covered by a collective agreement whilst in the private sector the percentage is about 30%. There are two main organisations representing the interests of employers on the island: the Cyprus Employers & Industrialists Federation (OEB) representing employers from all sectors of activity that account for over 60% of private sector workers, and the Cyprus Chamber of Commerce and Industry (CCCI), representing the interests of Cypriot businesses with a membership of more than 8,000 enterprises from all sectors of activity.

Private sector employees that are not members of a trade union are protected by legislation, through minimum safeguards concerning employment terms and conditions such as the minimum wage, working hours, etc. This is the case with various jobs for assistants in retail trade, offices, healthcare, childcare, education and security. The statutory minimum wage in Cyprus in the past years has been determined at about 50% of median wage. Since 1 April 2012, the level of the monthly minimum wage, payable 12 times a year, has been €870 for new hires and €924 after six months on the job.

Apart from negotiated increases, wages are also subject to wage indexation, the so-called Cost-of-Living Allowance (COLA). COLA is intended to make up for the loss of purchasing power, as a result of inflation, for a specified basket of consumer goods. Adjustment has been designed to take place on a biannual basis (every January and July). Wages are indexed to consumer price inflation, excluding increases in excise taxes.

#### **1.4 Changes in Main Institutional Characteristics of the Cypriot Labour Market post** Memorandum of Understanding

The capability of the Cypriot economy to adjust to shocks was not impeded by labour market institutions as the reform effort took the form of employment policies to facilitate the adjustment to the new economic conditions.

The wage–setting framework has been reformed to allow wage formation to better reflect labour productivity developments during both periods of growth and recession.. In the public sector, COLA has been frozen since 2012 and will remain so until end-2016, after which the reformed wage indexation system will apply. This includes lower (i.e. annual) frequency of indexation, automatic suspension of COLA during recessions and a move from full to partial (50%) indexation. Within the context of the MoU agreement, there has been a tripartite agreement relating to the extension of the reform of wage indexation to the private sector, in particular the first two elements but no consensus on the third.

As of 2013, and with a view to prevent possible adverse competitiveness and employment effects, the Cypriot authorities committed that, over the programme period, any change in the minimum wage should be in line with economic and labour market developments and that it will take place only after consultation with programme partners.

As regards measures to boost employment and to mitigate the negative social effects of unemployment, these include reinforcing public employment services, strengthening activation policies and a comprehensive reform of public assistance in order to achieve an appropriate balance between welfare benefits and work incentives, in particular via the introduction of the Guaranteed Minimum Income. Despite the turnaround in economic activity, the outlook of Cyprus's labour market remains challenging and, as such, more room for rapid, continuous and effective responses could be expected. There are a number of active labour market policies in place aiming to stimulate employment, including schemes for the job placement and training of tertiary education graduates, schemes to support youth and long-term unemployed as well as schemes for attracting people in the labour market through flexible forms of employment. In addition, as of 1 July 2013 working hours have been extended in an effort to activate the unemployed.

A system for the continuous monitoring and evaluation of active labour market policies is currently in place. At the moment, the government is implementing a comprehensive reform of its active labour market policies improving the design, administration and monitoring of the different measures. A common database is being set up so as to improve coordination and the automatic exchange of information between the different implementing bodies. The challenge will be to follow up on the results of these evaluations and then either amend, abolish or create new activation policies based on efficiency scores, in order to significantly improve the impact of the activation policies.

## Section 2

## The Survey Data

## 2.1 Data Collection and Sample Composition

The WDN3 Cyprus survey was conducted in-house over the period December 2014 to May 2015. The random sample was selected from the Business Register of the Cyprus Statistical Service (Cystat), which was updated in summer 2014. The selected firms were sent a covering letter along with a questionnaire, which was answered by the general and / or financial and / or human resource manager of the firm, using traditional mail and email and, in some cases, by phone and face-to-face interview.

The adjusted population of 9.590 firms (145.021 employees) consisted of companies under NACE Rev. 2 sectors C and F to N<sup>1</sup>, with 3 or more employees (micro firms of 3-4 employees, very small firms of 5-19 employees, small firms of 20-49 employees, medium-sized firms of 50-199 employees and large firms of 200 employees and over). **Table 1** below shows the relevant composition. In contrast to WDN3, WDN2 did not use the financial and insurance activities sector or the micro firms group.

	Manufacturing	Construction	Trade	Market Services	Financial Intermediation	Business Services	TOTAL
03-04	516	557	1666	658	105	641	4143
05-19	675	478	1506	859	139	655	4312
20-49	119	67	217	144	53	97	697
50-199	49	33	85	111	34	46	358
200 +	8	2	18	36	11	5	80
TOTAL	1367	1137	3492	1808	342	1444	9590

Table 1: Composition of adjusted population of firms (number)

The adjusted population excluded companies that were inactive and with no physical presence on the island (i.e. special purpose entities), and included companies with a continuous operation since at least 2008.

The gross sample consisted of 1.657 firms. Given the frequency of invalid contact details in the Company Register, a resampling request was submitted to Cystat for 298 companies. **Table 2** below shows the composition of the gross population of firms.

Table 2. composition of gross sample of mins (percentage)										
	Manufacturing	Construction	Trade	Market Services	Financial Intermediation	Business Services	TOTAL			
03-04	5.8	5.2	15.2	6.7	1.0	6.0	40.0			
05-19	7.3	4.2	13.8	8.6	1.3	7.0	42.2			
20-49	2.5	0.9	2.1	1.9	0.6	1.8	9.8			
50-199	1.5	0.5	0.9	1.5	0.5	1.0	6.0			
200 +	0.3	0.1	0.4	1.0	0.1	0.2	2.1			
TOTAL	17.4	11.0	32.4	19.6	3.6	16.0	100			

Table 2: Composition of gross sample of firms (percentage)

<sup>&</sup>lt;sup>1</sup> In the analysis that follows, NACE Rev. 2 sectors H to J are grouped as "market services" and sectors L to N are grouped as "business services".

The final realised sample consists of 182 responses (response rate of about 11%). The responses are stratified in **Table 3** by employment size as well as under the aforementioned sectoral groupings, totalling 49 strata<sup>2</sup>.

	Manufacturing	Construction	Trade	Market Services	Financial Intermediation	Business Services	TOTAL
03-04	3.3	4.4	7.7	2.7	0.5	8.2	26.9
05-19	7.1	4.9	15.4	4.9	1.1	6.6	40.1
20-49	4.9	1.1	2.7	2.2	1.6	3.3	15.9
50-199	2.7	1.1	1.1	2.2	1.1	2.2	10.4
200 +	0.5	0.5	0.5	2.7	0.5	1.6	6.6
TOTAL	18.7	12.1	27.5	14.8	4.9	22.0	100

Table 3: Composition of net sample of firms (percentage)

In comparing the composition of the gross and net samples, it proved difficult to elicit responses from firms with 3-4 employees. A number of them cited the difficulties in responding to the questions as they were mostly family-run without a specific wage and price setting policy.

The firms in the realised sample are mostly parent companies. They are also domestically owned and of single establishment status (**Table 4**).

Table in off detaile) of the spontency								
Structure:	Ownership:		Autonomy:					
Single establishment firm	74	Domestic by majority	91	Parent company	46			
Multi-establishment firm	26	Foreign by majority	9	Subsidiary / affiliate	46			
				Enterprise of other kind	8			
	100		100		100			

#### Table 4: Structure, ownership and autonomy status of firms (percentage of respondents)

#### 2.2 Main Similarities / Differences with Respect to the Previous Survey

As was the case with WDN2, the questionnaire used in WDN3 comprised of a set of core questions, which were common across all participating countries. Some non-core and some country-specific questions were also incorporated in WDN3, in contrast to WDN2. Considering the set of core questions used in WDN2, only some are comparable to WDN3; among these, the majority is not fully comparable given the response options available to respondents.

In a similar vein to WDN2, WDN3 explores the wage and price-setting policies of firms, including the degree of collective bargaining coverage, wage indexation and share of bonuses in the wage bill. Instead of asking for hypothetical responses to demand, supply and cost-push shocks, as was the case in WDN2, the questions incorporated in WDN3 explore the realised responses of firms to shocks emanating from the financial crisis. The price-setting part of the questionnaire is supplemented with questions on price developments during 2010-2013, sources of revenue, as well as relevance of competitive changes as factors for price changes.

The comparison of the findings with the previous WDN survey wave are incorporated into the third section of this report. The tables and charts in Appendices A and B present supporting information related to firm responses from survey questions covered in the third and fourth sections of this report, in particular micro analysis at both sectoral and firm size level.

<sup>&</sup>lt;sup>2</sup> NACE Rev 2 sector Real Estate Activities, included in the business services group, did not have firms in the large firms' category

## Section 3

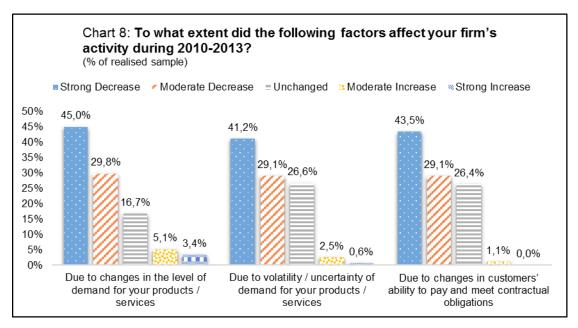
## **Results on Adjustments and Wage-Setting Changes**

Over the period under review (2010-2013), which was marked by the harsh economic environment described in Section 1, it emerges that companies were most negatively impacted by shocks related to changes in demand and to a lesser extent by shocks related to access to finance. In order to respond to these shocks, companies proceeded with labour cost reduction strategies, including wage-setting changes. The magnitude of the decline in base wages, in particular that observed in 2013 in response to the decisions of the Eurogroup in March 2013, highlights the ability and willingness of both Cypriot firms and their employees to adapt to shocks.

#### 3.1 Sources and Size of Shocks

WDN3 investigated five types of shocks: changes in level and volatility of demand, access to finance, customers' ability to pay and access to supplies from usual suppliers. The survey also examined whether their impact was viewed as transitory, partly persistent or long lasting.

The major shocks that affected companies' activities during 2010-2013 related primarily to changes in the level of demand. Other important shocks included changes in the volatility / uncertainty of demand for products and services and the ability of customers to pay and meet their contractual obligations (**Chart 8**). In particular, over 70% of respondents reported a decrease in firm's activities on account of the aforementioned factors, with only around 11% of companies declaring that these will have a short-term impact on their firm's activity (**Chart B.1**, **Appendix B**, p. 41).



Further analysis of the abovementioned shocks in terms of firm size shows that there has been a shift in demand from small size firms to larger ones. In addition, 55% of large companies reported no change in access to finance, which could be attributed to availability of other sources of finance such as own funds or higher revenues due to an increase in market share in light of price competition (**Chart 19**, p. 27). Furthermore, larger firms usually have easier access to credit from banks than smaller ones mainly due to their ability to provide higher quality collateral and better creditworthiness. Another key point to note is that 73% of respondent firms with over 199 employees reported no change in customers' ability to pay and meet contractual obligations, which could be due to the fact that larger companies work on the basis of contracts to greater extent than smaller ones (**Chart B.2A**, **Appendix B**, p. 42). This approach could provide them with the advantage of screening and forecasting cash flows in order to manage their liabilities or working capital without using external financing.

On a sectoral level, **construction was most severely affected across all types of shock**. In particular, over 80% of respondent firms stated that there was a decrease in the firm's activity due to changes in level and volatility of demand, access to external financing and customers' ability to pay and meet contractual obligations (Chart B.2B, Appendix B, p. 43). These shocks affected micro and very small size businesses to a greater extent than larger ones. The trade sector was also affected from the shocks in question, with over 67% of respondent firms reporting a decrease in firm activity on account of changes in level and volatility of demand. However, the most severe shock experienced by the trade sector related to the ability of customers to pay and meet their obligations (82,3% of respondent firms). Almost identical impacts are observed by respondent firms within the business services sector with one exception, namely the ability of customers to pay and meet their obligations, which exhibits a significantly smaller decrease in comparison with the trade sector, probably due to the prevalence of contract agreements.

Assessing the perceived duration effect of the abovementioned shocks on firms' activities, it is evident that only a few firms consider the impact of these factors on company activities to be transitory and most of them consider the factors to have a medium- to long-term effect (Chart B.1, Appendix B, p. 41). Further analysis of the duration of the shocks and separating the responses according to whether the shock led to a strong decrease or strong increase upon the firm's activity (Table 5), reveals that the overall impression is rather pessimistic. Many of the respondent firms that stated a strong decrease due to changes in level and volatility of demand and customers' ability to pay and meet their obligations, also reported a medium- and long-lasting duration of these shocks.

		Transitory (short-term effect)	Only partly persistent (medium term effect)	Long-lasting (long term effect)
Due to changes in the level of demand	Strong decrease	9.6%	55.0%	27.6%
for your products / services	Strong increase	1.1%	3.3%	3.3%
Due to volatility / uncertainty of	Strong decrease	7.6%	52.4%	38.2%
demand for your products / services	Strong increase	1.3%		0.4%
Due to changes in customers' ability to	Strong decrease	13.8%	54.6%	31.6%
pay and meet contractual obligations	Strong increase			

Table 5: Breakdown of shocks and their duration effect (percentage of respondents)

In terms of firm size (Appendix Table A.1, p. 33), small firms indicated their belief that the shocks' duration will have a medium to long-term effect on firm activity, whilst on the other hand larger firms stated the opposite, i.e. that the shocks are expected to have a short- to medium-term effect on firm activity. This result could be attributed to firms' perceptions of adverse economic prospects at the time of the conduct of the survey, possibly due to the unprecedented decisions of the Eurogroup in March 2013, including the extensive bail-in of uninsured depositors. Something that is of particular interest is the fact that among firms with over 199 employees, 48% reported a strong increase in level and volatility of demand and deem this change to be long-lasting. Analysis on a sectoral level (Table A.3, Appendix A, p. 34) demonstrates that changes in the level of demand have a medium-term impact on the

activities of firms within the construction and trade sectors (82,1% and 74,5% of respondents, respectively). In the market services sector, 77,9% of respondents stated that changes in the level of demand are expected to have a long-lasting impact.

It is crucial to examine the source of the shock in demand, in particular whether it is domestic or foreign, and how firms behaved in relation to changing their prices of their main product or service in both domestic and foreign markets. During 2010-2013, it would appear that the **shock in demand was both due to the domestic and foreign market (Table 6)**, but more significant due to the fall in demand in the domestic market. In particular, 79,3% and 43,2% of respondents reported a decrease in domestic and foreign demand, respectively. Following the same trend as demand, firms proceeded to decrease the prices of their main product **and service in order to cope with the changing market, with a decrease of 63,9% and 42,4% in the domestic and foreign markets, respectively**.

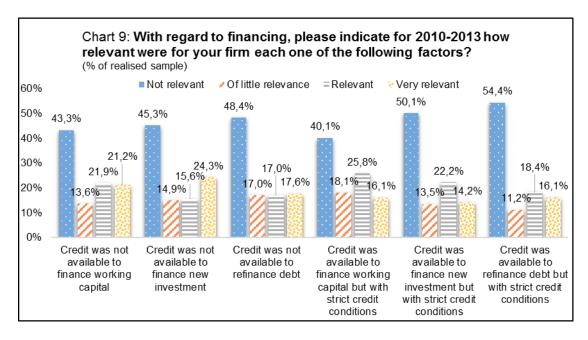
	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase
Domestic demand for your main product / service	39.0%	40.3%	14.0%	6.1%	0.7%
Foreign demand for your main product / service	20.9%	22.3%	52.6%	3.8%	0.4%
Prices of your main product / service in domestic markets	26.3%	37.6%	24.7%	10.7%	0.7%
Prices of your main product / service in foreign markets	14.6%	27.8%	50.8%	5.3%	1.5%

Table 6: Evolution of prices and demand (percentage of realised sample)

A sectoral analysis indicates that the construction sector was most severely affected due to changes in demand. Specifically, 84,4% and 56,1% of the respondent firms stated a strong decrease in demand in the domestic and foreign markets, respectively (**Table A.4, Appendix A**, p. 35). This strong decrease in demand sparked a rapid change in firms' pricing behaviour regarding their main product or service, pushing firms to proceed with price reductions of the order of 75% and 48,1% in domestic and foreign markets, respectively. Furthermore, the market services and business services sectors experienced a severe decrease in both domestic and foreign demand and again firms proceeded with the reduction of prices as a response to the change in demand. Analysing the changes in demand according to firm size reveals that domestic demand shifted from very small firms to larger ones (**Table A.4, Appendix A**, p. 35) despite the fact that small firms (in the 3-4 and 5-19 employment size groups) initiated price reductions in order to compete with larger firms.

The survey also assessed the availability of financial resources to firms either for working capital, new investment or debt restructuring, with the key result (reported by over 40% of the respondents) being that financial constraints were not relevant (**Chart 9**, p. 19). This could be explained by a number of factors. First, the survey question relates to the availability of all types of credit, not only bank credit. Given that most companies are SMEs and highly leveraged, it could be the case that the adverse effects of the tightened bank lending conditions were minimised by the availability of inward funds (e.g. revenues from sale of assets, cutting prices to gain market share, etc.). Second, the survey question cannot distinguish between firms that requested a loan and were not granted one from firms that did not request a loan for various reasons. This view is supported by consecutive Bank Lending Survey (BLS) results covering the period under consideration, pointing to continuous tight credit conditions and low loan demand. On the basis of the responses of the participating banks in the BLS, factors behind low demand for loans include lower need for inventories and working capital as well as lack of new fixed investment. Overall, given the decrease in demand

as well as their relatively highly leveraged position, it appears that a significant proportion of companies relied, at least over the period under consideration, on availability of inward funds.



The change in financing conditions varies by sector of economic activity (**Table A.5**, **Appendix A**, p. 36), with the most significant impact observed for the construction sector where over 40% of respondent firms stated that financing constrains are very relevant. The business services sector also reported financing constraints, especially related to the availability of credit to finance working capital and new investment (39,9% and 40,5% of respondent firms, respectively). A further breakdown of the responses of firms within the construction and business services sectors according to firm size indicates that **financing constraints concerned mostly micro and very small businesses (Table A.5**, **Appendix A**, p. 36).

## 3.2 Methods of Adjustment: Costs / Wages versus Labour Force Composition

The WDN3 micro data indicate that over the period 2010-2013, Cypriot firms faced a lot of pressure given the difficult economic environment. In order to remain competitive, firms proceeded with decreases in total costs, with cuts in labour costs and cost of supplies being the main drivers (Table 7). Around 48% of respondents stated that financing costs remained unchanged over the period under consideration, a result which is in line with the responses to question C2.3 on credit conditions in the previous section.

Table 7. Changes in total cost and sub-components (percentage of realised sample)									
	Total Costs	Labour Costs	Financing Costs	Cost of Supplies	Other Costs				
Decrease	55.2%	46.7%	18.0%	39.2%	20.7%				
Unchanged	17.6%	28.1%	48.1%	35.4%	58.0%				
Increase	27.2%	25.2%	33.9%	25.4%	21.3%				

The manufacturing and construction sectors reported the biggest decreases in total costs and labour costs (**Table A.6**, **Appendix A**, p. 37). Given the sectors' field of activity, it is reasonable to assume that they proceeded with a reduction of production costs in order to strengthen their competiveness and / or avoid foreclosure and bankruptcy. **The key total cost sub-components used to reduce costs of production were labour costs and cost of supplies** as

reported by 55,3% and 67% for firms in the manufacturing sector and 60,1% and 45,2% for firms in the construction sector, respectively (**Table A.6**, **Appendix A**, p. 37).

Given that labour cost adjustment is one of the most common and extensively used cost reduction strategies, it is crucial to identify the precise labour cost sub-components used to do so. Three sub-components are reported to have the most significant impact on labour costs: basic wages, flexible wage components (e.g. bonuses, fringe benefits, etc.) and the number of permanent employees (Table 8). The decrease in the workforce is evident by the decline in the average company size from about 22 employees in 2010 to 19 in 2013. It should be noted that this result suffers from "survival bias" given that those firms that participated in the survey are those that managed to weather the crisis. Therefore, the relevant decline is, most probably, much greater than is indicated by the figures. In terms of nationality, WDN data point to the exodus of EU nationals from the Cypriot labour market, a finding that is in line with hational accounts data which point to a significant reduction by 7,9% in cumulative terms over the period 2010-2013. The reported nil change in working hours per employee over the period under consideration is also corroborated by national accounts data which point to a marginal decline of 0,8% over 2010-2013 in cumulative terms.

A sectoral analysis of firms' responses suggests that firms in the manufacturing, construction and business services sectors (over 61% of respondents) reduced their labour costs by lowering their number of permanent employees. A firm size analysis points to the use of the aforementioned labour cost reduction strategy in the 20-49 employment size group (over 64% of respondents reported either a moderate or a strong decrease) (**Table A.7**, **Appendix A**, p. 38).

	Base wages or piece work rates	Flexible wage components (bonuses, fringe benefits, etc.)	Number of Permanent employees	Number of temporary / fixed- term employees	Number of Agency Workers	Working hours per employee	Other components of labour costs
Decrease	47.1%	43.2%	48.7%	27.1%	15.6%	18.7%	23.3%
Unchanged	36.1%	49.1%	41.1%	61.0%	83.3%	72.4%	71.4%
Increase	16.8%	7.7%	10.2%	11.9%	1.1%	8.8%	5.4%

Table 8: Changes in labour cost sub-components (percentage of realised sample)

Another way for firms to adjust their total costs is via changes in the composition of their labour force. Compared with WDN2, there was no change between the percentages of manual and non-manual labour. However, within the two labour components, there has been a shift from higher-skilled to lower-skilled workers. This is an indication that firms not only proceeded with labour cost reductions but also proceeded with changes in their labour force composition in order to address the challenges posed by the difficult economic environment.

Assessing further the labour force adjustment strategies, 42,5% of firms stated that they proceeded with a reduction in the number of employees over the period 2010-2013 and 27,8% of firms changed their workforce composition by occupational group. The most prevalent labour force adjustment strategies related to individual layoffs (70,6% of respondent firms) and a freeze or reduction of new hires (60,5% of respondent firms) (Chart

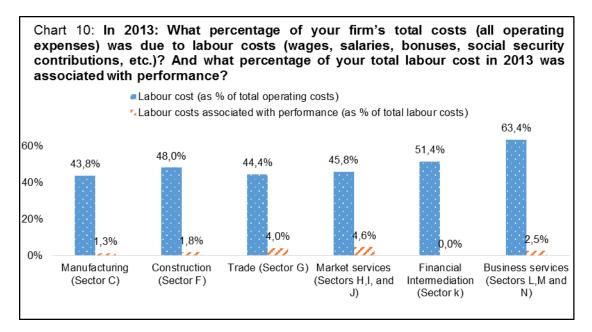
**B.4**, **Appendix B**, p. 45). Firms that moderately or strongly adjusted both individual layoffs and froze or reduced new hires were from the manufacturing, construction, trade and business services sectors (**Table A.8**, **Appendix A**, p. 38).

In terms of size, companies with 50-199 employees resorted mostly to a freeze or a reduction of new hires (75,9%).

#### **3.3 Changes in Wage-Setting Practices**

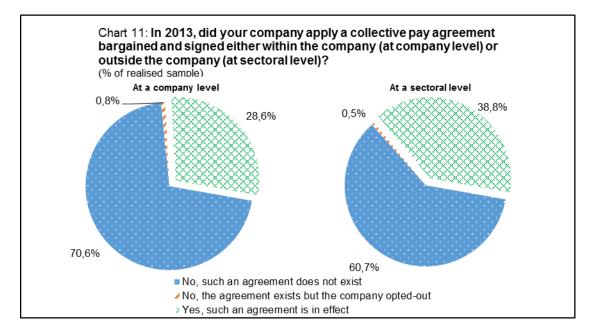
This section focuses on wage setting practices and the frequency of wage changes. The relevant survey questions attempt to elicit information on the share of labour costs in total costs as well as the share of performance related bonuses in the wage bill, on coverage and scope of collective bargaining and the incidence of indexation increases. The prevalence and timing of wage cuts and freezes as well as a comparison of the wages of incumbents and newly hired employees across time is also explored via the use of country-specific questions.

The labour share of income in Cyprus is about 65% on the basis of national accounts data. WDN3 data point to a lower ratio of labour costs to total costs of about 44,6%. The business services sector exhibits a ratio above 60% (**Chart 10**). The relatively lower share compared to national accounts data could be attributed, in part, to the sectoral coverage of the survey (sectors not covered could be more labour intensive than those covered) as well as the possibility that micro firms (not covered to a representative extent by the survey) demonstrate a higher share of labour costs to total costs. The latter hypothesis is supported by an employment size analysis, whereby micro firms' labour costs to total costs is 50,1%. In WDN2, the share of labour costs to total costs stood at about 38%. The higher share in WDN3 is reflective of the wider sectoral (inclusion of financial and insurance activities) and employment size (inclusion of micro firms) coverage relative to the previous survey. Regarding the share of labour costs associated with performance, results are similar across the two surveys (around 5%).

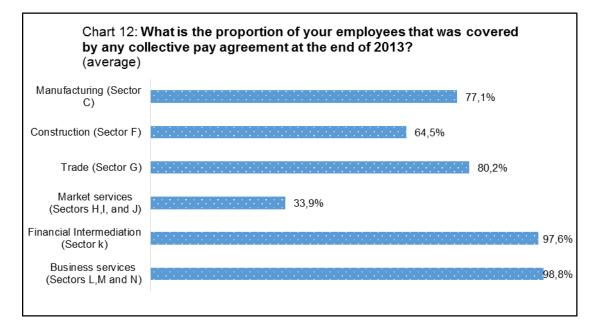


Regarding coverage of collective bargaining, there has been an increase in the share of respondents reporting presence of wage agreements both at company and sectoral levels.

Specifically, about 25% of respondents in WDN2 reported that a collective agreement was signed at company and sectoral levels, respectively, whilst in WDN3 the relevant shares rose to 28,6% and 38,5%, respectively (**Chart 11**). However, a notably smaller number of firms responded to this question than was the case in WDN2.

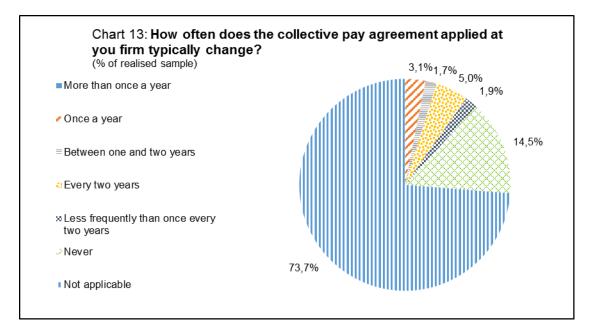


The rise could be partly attributed to the inclusion of the sector related to financial and insurance activities in the WDN3 survey and the fact that coverage is at 100% for bank employees (as per WDN3 results, 97,6% of employees from the aforementioned sector are covered). Overall, about 74,5% of employees in WDN3 are covered by a collective wage agreement compared with about 70% as per WDN2 (**Chart 12**). Around half of the respondents to this question were firms from the manufacturing sector (77,1% of employees covered).

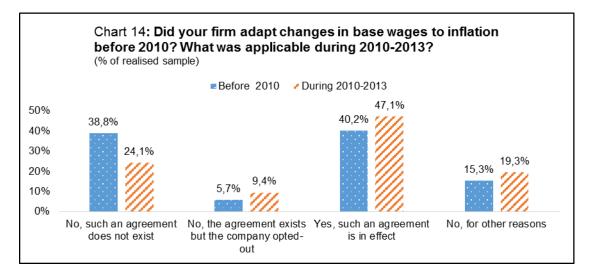


In relation to the frequency of changes in the collective pay agreement, the majority of respondents do so once every two years (Chart 13, p. 23). The majority of firms (73,7%) Page 22 of 57

reported that collective pay agreements are not applicable to them. This could be due to the fact that following the shock to the banking system in March 2013, the renewal of collective agreements has been suspended until the resumption of economic growth and the restoration of company profitability. Collective pay agreements are also non-applicable in the case when companies employ temporary / fixed-term contract workers (14 companies in the net sample).



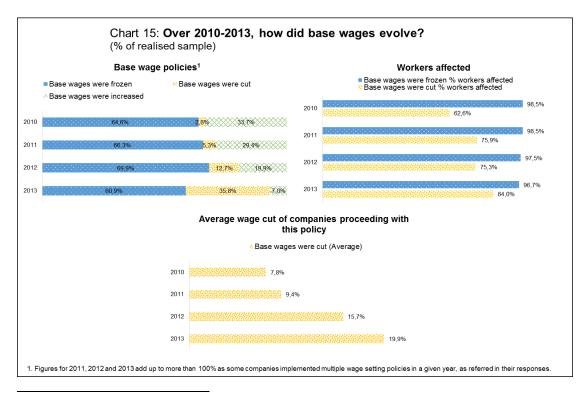
Regarding the adjustment of wages to inflation (**Chart 14**), there was an increase in the number of firms adapting base wages to inflation during the 2010-2013 period compare with prior to 2010 (47,2% versus 40,2%). The results also point to a rising trend as regards the number of companies opting out (9,4% over 2001-2013 relative to 5,7% in the period before 2010). As a consistency check, the relevant WDN3 result for the period before 2010 is broadly close to that of WDN2 (47,6% of firms responded that they pursue a policy that adapts base wages to inflation). The difference in the reported percentage could be partly explained by the different reference year used (2008 in WDN2).



The responses in Chart 15 demonstrate the considerable flexibility of the Cypriot labour market, particularly following the shock to the banking system in March 2013. Specifically, Page 23 of 57

there has been a significant increase in the number of companies cutting wages over time (from 2,8% in 2010 to 35,1% in 2013). At the same time, there has been a significant decrease in the number of companies granting wage increases (from 33,7% in 2010 down to 7% in 2013). Focusing on 2013, wage increases are reported by firms operating in the sectors of trade, financial intermediation (cooperatives, included in our sample, did not change their collective agreements until March 2014) and business services (foreign owned companies or companies servicing foreign markets). Additionally, other than the increase in the number of companies cutting wages, there has been an increase in the percentage of workers affected (from 62,6% in 2010 up to 84% in 2013). It should also be noted that among those companies that have pursued a policy of freezing wages (60,9% of respondents in 2013), this policy has been applied almost universally across all workers. Finally, as regards the average size of wage cuts, this has increased continuously over time, from 7,8% in 2010 to 19,9% in 2013. When compared against the WDN2 responses, the aforementioned freezes and declines in wages over the period 2010-2013 lend further support to the view that the Cypriot labour market has shown considerable signs of flexibility. In particular, only about 17% of respondents as per WDN2 reported that they proceeded with a freeze of wages and only 8% reported an intention to do so. As regards wage cuts, only 2% of respondents reported that they have cut wages and only 2% that they intended to do so. It should be remembered that these responses were collected in early 2010 using 2009 as the reference year<sup>3</sup>. Whilst 2009 was the first year following the Turkish invasion of 1974 that an economic contraction materialised, the responses suggest that companies considered the impact of the crisis to be transitory.

A more in depth analysis of the WDN3 responses at a sectoral level demonstrates that sectors related to transportation and storage and professional services (NACE Rev.2 sectors H and M respectively) have implemented continuous wage decreases over the 4-year period (largest decrease in H). Considering employment size, micro and very small firms have introduced continuous declines in wages (with micro firms affected most) (**Table A.9**, **Appendix A**, p. 39).

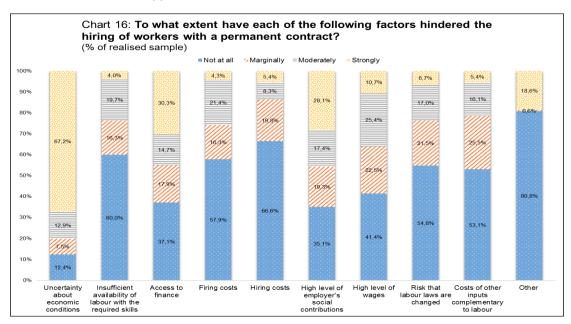


<sup>&</sup>lt;sup>3</sup> Further to the WDN2 main questionnaire carried out in summer 2009, a small follow up survey within the context of WDN2 was carried out early in 2010.

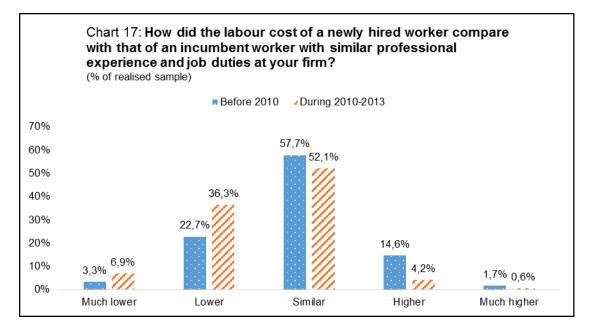
#### 3.4 Main Obstacles to Hiring and Newly Hired Worker Labour Costs

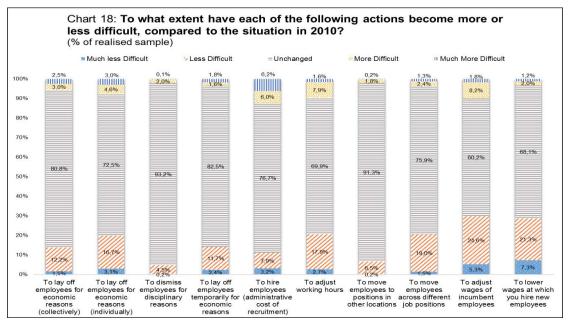
Following the unprecedented shock to the banking system in March 2013 and the associated spillovers to other sectors of economic activity, there has been a sharp rise in unemployment coupled with a decline in employment. Some sectors experienced a decline even prior to that, e.g. construction as of 2009. More recent Labour Force Survey and national accounts data demonstrate a turning point as regards labour market developments. In particular, following an all-time high of 17,7% recorded in the first quarter of 2015, the unemployment rate declined to 14,7% in the second quarter of the year. Also, employment grew by 0,1% over the first half of 2015 on a year-on-year basis. Given the aforementioned labour market features to alleviate obstacles to hiring. As such, WDN3 incorporates one core and one non-core question to investigate the relevance of factors as obstacles in hiring workers with a permanent, openended contract as well as any changes over time of the labour cost of a newly hired worker relative to that of an incumbent worker with similar professional experience and job duties.

The most relevant obstacle to hiring reported in the WDN3 results is uncertainty about economic conditions (87,6% of respondents). Access to finance (62,9% of respondents), social contributions (64,9% of respondents) and wages (58,6% of respondents) are also important factors (**Chart 16**). On the basis of a sectoral analysis, these factors seem even more important for companies in the construction sector, which were disproportionately affected by the economic crisis (63,8%, 70,3% and 65,7% of relevant respondents reported that each of the aforementioned factors affected them either moderately or strongly). Access to finance was also a relevant factor for firms in the business services sector (73,4% reported that they were affected either moderately or strongly). Labour shortages are deemed not to be important obstacles (60% of respondents), lending support to the view that there is a relatively good match between skills supplied and skills demanded.



The presence of possible wage differentials between new hires and incumbent workers could be an important factor shaping firms' responses to shocks. WDN2 explored the issue of the wages of incumbents, pointing to the reluctance of firms to lower their wages given that it Page 25 of 57 was considered to have an adverse effect on the ability to hire new workers as well as on the morale and productivity of incumbents. **WDN3 results point to increased tendency on the part of the employers to hire new workers with lower wages than incumbents.** In particular, in the period before 2010, 26% of respondents reported lower and much lower wages of newly hired workers relative to incumbents with similar professional experience and job duties, whereas over the period 2010-2013 the percentage of respondents rose to about 43% (**Chart 17**). The responses to this question coincide with those in **Chart 18** with about 29% of respondents reporting that it has become easier to hire new entrants with lower wages.



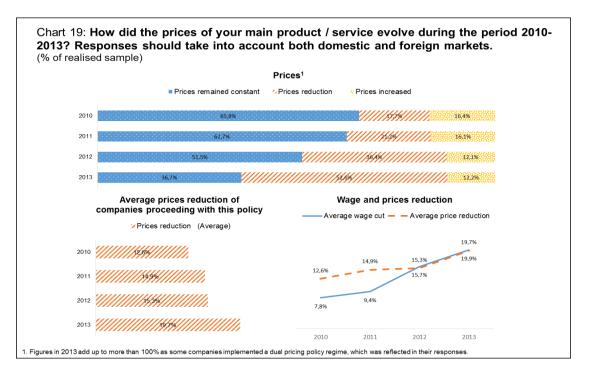


## Section 4

## **Change in Price-Setting Policies**

This section of the report looks closer at firms' price-setting practices as well as the frequency of their price changes over 2010-2013. It analyses the annual evolution of prices, gauging at the same time the average price reduction, if any. In addition, it further examines the allotment of sales as well as the degree and development of competition between foreign and domestic markets. Moreover, it investigates the link between prices and wages, and the response of firms' prices to various shocks. What should be noted is that, in line with the speedy adjustment of wages, companies proceeded with significant cuts in prices for their main product/service in 2013, in order to address the shocks following the decisions of the Eurogroup in March 2013.

To start with, companies were asked to report on the price developments of their main product/service<sup>4</sup> over the period 2010–2013 in a question that mirrors question C4.7, thus facilitating the comparison between changes in wages and prices. As observed in Chart 19, there is a rapid increase in the number of companies cutting prices during 2010-2013, with the ratio of companies reducing prices increasing significantly from around 18% in 2010 to around 51% in 2013, in line with the reduction in economic activity due to the economic crisis.



It should be noted that the bulk of this increase is due to the decline in companies that maintained their prices unchanged, the ratio of which declined from around 66% in 2010 to about 37% in 2013. Meanwhile, there was a more modest decrease in the number of companies which increased their prices, from around 16% in 2010 to around 12% in 2013.

<sup>&</sup>lt;sup>4</sup> Refers to the product / service which generated the highest share of their firm's revenue.

In addition to the increase in companies cutting prices, there was also an increase in the average price reduction per company, in particular from 12,6% in 2010 up to 19,4% in 2013. It's noteworthy that close to 11% of respondent firms implemented price cuts across all four years of the period under examination. Essentially, this means that the economic crisis had a dual effect on prices, since around half of the respondent firms in WDN3 slashed close to 20% of their prices in 2013.

Some important results for the average price adjustments during the period 2010-2013 are derived from a sectoral and employment size analysis (**Tables 9 and 10**, respectively). Those sectors reducing prices the most were manufacturing, construction and market services (in particular, transportation and storage and information and communication), a direct consequence of the drop in economic activity as manufacturing and especially the construction sector took a heavy hit from the crisis. Looking at the average price reductions by employment size, it appears that the micro firms group (3-4 employees) reduced prices the most in an attempt to remain competitive, whereas large companies with over 199 employees actually exhibited a declining trend in their price reductions, as shown in **Table 10**.

	Manufacturing (Sector C)	Construction (Sector F)	Trade (Sector G)	Market services (Sectors H,I, and J)	Financial Intermediation (Sector k)	Business services (Sectors L,M and N)
2010	13.6%	9.6%	7.8%	16.3%	10.0%	12.6%
2011	18.0%	15.3%	6.2%	17.1%	10.0%	12.0%
2012	20.7%	19.1%	6.7%	17.5%		13.2%
2013	25.2%	26.1%	10.2%	20.0%		21.7%

Table 9: Average price reduction across sectors (% of realised sample)

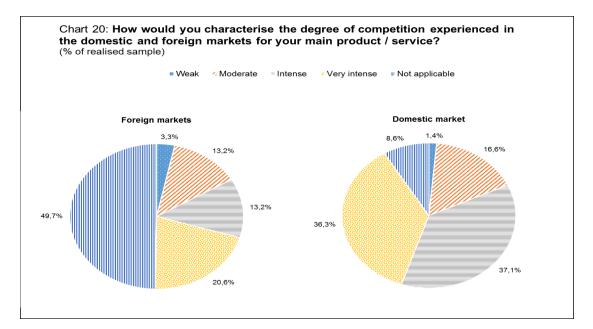
	01		<u> </u>	1	
	03_04	05_19	20_49	50_199	over_199
2010	11.2%	14.2%	8.8%	12.8%	
2011	14.8%	16.1%	10.0%	9.0%	20.0%
2012	15.7%	16.2%	8.5%	12.4%	11.5%
2013	20.9%	19.0%	13.6%	12.6%	3.8%

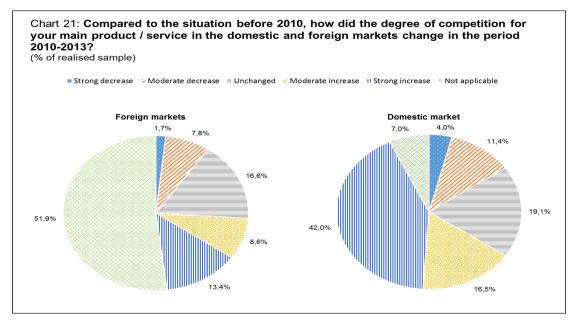
In terms of the share of sales between the domestic and foreign markets for the firms' main product or service, firms responded that, on average, around 81% of their sales in 2013 came from the domestic market and the remaining 19% from foreign markets. These shares mask noteworthy differences at the sectoral level, with the share of sales in foreign markets tending to be higher when companies with a more diverse clientele are considered, such as construction, market services, financial intermediation and business services (**Table 11**).

	Manufacturing (C)	Construction (F)	Trade (G)	Market services (H,I,J)	Financial & Insurance Activities (K)	Business services (L,M,N)	Total
Sales in the domestic market	91,1	74,9	92,4	63,7	77,8	71,4	81,2
Sales to foreign markets	8,9	25,1	7,6	36,3	22,2	28,6	18,8

Following the global economic crisis and particularly in 2013, consumers were very cautious and targeted their spending. As the market was shrinking due to the fall in demand, firms were constantly trying to attract customers, which was another reason for the reduction in prices. Almost 75% of firms characterised the competition for their main product / service in the domestic market as intense or very intense (**Chart 20**), and almost 59% stated that there was a moderate / strong increase in competition in the domestic market during the period 2010–2013 compared to before 2010 (**Chart 21**).

In terms of competition for their main product/service from foreign markets, almost 50% of respondents answered that this was not applicable, and only around 34% stated that it was intense or very intense (**Chart 20**). In addition, only 22% stated that competition from foreign markets had increased over the period 2010–2013 compared to before 2010 (**Chart 21**).





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Looking at the evolution of domestic competition at a sectoral level, 86% of firms in the construction sector stated that competition in their sector is intense or very intense, with around 78% of the financial intermediation firms stating the same (**Table A.10**, **Appendix A**, p. 39). Comparing domestic competition between the period 2010–2013 and prior to 2010, around 72% of firms in the financial intermediation sector stated that there was a moderate to strong increase, whereas 64% and 63% of construction and trade sectors firms, respectively, noted the same (**Table A.11**, **Appendix A**, p. 40).

In terms of competition from foreign markets at a sectoral level, around 54% and 45% of firms in the business services and market services sectors, respectively, stated they were experiencing intense or very intense competition (**Table A.10**, **Appendix A**, p. 39). About 39% of the firms in the business services sector also stated that the degree of competition in their sector from foreign markets had experienced a moderate to strong increase (**Table A.11**, **Appendix A**, p. 40).

Regarding the wage-price link, this can be deduced from question CS8 of the questionnaire, which was structured in an almost identical way as question C4.7 of the previous section. The reasoning for this was to create two matching questions in order to produce easily comparable answers.

As observed from the data, there appears to be a dichotomy between average wage and price reduction in the years 2010 and 2011, years in which the recovery was very weak and temporary. Namely, the average price reduction was 12,6% and 14,9% in 2010 and 2011, respectively, whereas the average wage cut was 7,8% and 9,4% in each of the abovementioned years. This might suggest that despite the mild economic recovery, firms chose to improve their competiveness primarily through price competition rather than by reducing wages. However, a shift in firms' attitudes during 2012 and 2013 is observed. As the economy deteriorated again, there was an increase in the number of companies reducing prices, as well as in the size of the average price reduction, whereby more than half of the companies in the survey reduced prices by close to 20%.

Given the reversal in economic conditions as of 2012, firms seem to have taken more drastic measures on wages as the share of firms cutting base wages rose from 5,3% in 2011 to 12,7% in 2012 and to 35,8% in 2013. In addition, the average wage reduction rose substantially in 2012 to 15,7% (compared with 9,4% in 2011) and then to 19,9% in 2013. The average wage reductions in 2012 and 2013 slightly edged the average price reductions in those years, possibly signalling that firms ramped up cost reductions when the economy fell back into recession, putting them roughly on par with price reductions.

Overall, the WDN3 results for Cyprus on price developments corroborate those on wage developments, where both channels were used as a first response mechanism to the Eurogroup decision of March 2013. Due to the deterioration of economic activity at the time, firms sought to increase their competitiveness in order to survive and the adjustment to prices was even more pronounced than wages, signalling that firms were quick on their feet to react to changing economic conditions.

## Section 5

## Conclusions

The research focus of WDN3 was to assess the reaction of domestic firms to shocks that took place over the period 2010-2013 and to gauge their impact on their wage and price setting policies.

The main shock to firms' activity related to changes in the level and volatility of demand. As a response to the crisis, firms proceeded with cost reduction strategies (decreases in base wages, flexible wage components and number of permanent employees). Over the period 2010-2013, a shift in demand from smaller to larger firms is observed, despite the fact that, on average, small firms responded by decreasing prices more than larger firms. Furthermore, the impact due to financing conditions appeared relatively limited over the entire sample. However, financial constraints proved important for smaller firms (3-19 employees) in the construction and market services sectors. The issue of survival bias should also be noted, i.e. after the bail-in of deposits in March 2013, a number of firms that potentially faced financing problems closed down. Finally, it emerges that in general companies initially responded by cutting prices more than wages. In 2012, they increased the average wage cut, broadly matching the cut in prices. During the period 2010-2013, there was an increase in the number of companies implementing both wage and price reductions as well as in the magnitude of the average wage and price cuts.

To conclude, WDN3 results demonstrate the flexibility of the Cyprus economy as well as the rapid response by businesses to shocks via cuts in wages and prices, especially following the restructuring and substantial downsizing of the banking sector and the extensive bail-in of uninsured depositors following the March 2013 events. This rapid adjustment assisted businesses in terms of financing their activities via own funds in order to minimise the adverse effects of the tightening in bank credit conditions. Generally, it emerges that the private sector was in a position to adapt well to the unprecedented decisions of the Eurogroup in March 2013, through the speedy and significant adjustment of both wages and prices via this process of internal devaluation, despite the immediate social cost. It is important to note that there was a spirit of solidarity across the island, as unionised and non-unionised employees chose to take these cuts in their stride and work towards a better future. There were little, if any, protests following the announcements of wage cuts. This adjustment process helped, at least partially, towards the correction of macroeconomic imbalances.

# Appendices

## **Appendix A: Tables**

#### Table A.1

Shocks duration		Transitory (short-term	Only partly persistent	Long-lasting (long-
effect	Firm Size	effect)	(medium-term effect)	term effect)
Due to changes in the level of demand for	03-04	12.1%	69.1%	18.9%
	05-19	3.0%	51.5%	45.5%
your products /	20-49	42.7%	42.5%	14.7%
services	50-199	39.7%	42.7%	17.7%
	over 199	20.0%	32.0%	48.0%
	03-04	8.5%	58.0%	33.5%
Due to volatility /	05-19	3.5%	47.6%	48.9%
uncertainty of demand for your	20-49	25.8%	74.2%	
products / services	50-199	44.4%	30.0%	25.7%
products y services	over 199	20.0%	32.0%	48.0%
	03-04	8.9%	36.0%	55.0%
Due to changes in	05-19	14.2%	41.3%	44.5%
access to finance (not	20-49	7.2%	82.4%	10.3%
from own funds)	50-199	15.5%	54.6%	29.9%
	over 199		80.0%	20.0%
Due to changes in	03-04	7.5%	66.3%	26.2%
customers' ability to	05-19	18.3%	43.8%	37.9%
pay and meet	20-49		78.2%	21.8%
contractual	50-199	49.0%	22.7%	28.3%
obligations	over 199		100.0%	
	03-04	18.1%	63.5%	18.4%
Due to changes in	05-19		69.8%	30.2%
availability of supplies from your	20-49		100.0%	
usual suppliers	50-199		100.0%	
usuur suppriers	over 199			

Shocks duration effect	Firm Size	Transitory (short- terrm effect)	Only partly persistent (medium- term effect)	Long- lasting (long-term effect)	Firm Size	Transitory (short term effect)	Only partly persistent (medium term effect)	Long- lasting (long term effect)
		Strong	decrease			Strong	g increase	
	03-04	12.1%	69.1%	18.9%	03-04			
Due to changes in	05-19	3.0%	44.8%	39.6%	05-19		6.7%	5.9%
the level of demand	20-49	18.6%	42.5%	7.4%	20-49	24.1%		7.4%
for your products / services	50-199	39.7%	37.3%	17.7%	50-199		5.4%	
Services	over 199	20.0%	32.0%		over 199			48.0%
	03-04	8.5%	58.0%	28.6%	03-04			
Due to volatility /	05-19		34.7%	42.6%	05-19			
uncertainty of demand for your	20-49		48.3%		20-49	25.8%		
products / services	50-199	44.4%	30.0%	25.7%	50-199			
products y services	over 199	20.0%	32.0%		over 199			48.0%
Due to changes in	03-04	7.5%	40.9%	18.5%	03-04			
customers' ability	05-19	15.6%	24.7%	13.4%	05-19		2.8%	
to pay and meet	20-49		18.1%	16.7%	20-49			
contractual	50-199	49.0%	5.0%	28.3%	50-199			
obligations	over 199		92.9%		over 199			

Shocks duration effect	Sectors	Transitory (short- term effect)	Only partly persistent (medium- term effect)	Long-lasting (long-term effect)
	Manufacturing	25.6%	47.2%	27.2%
Due to changes in the level of demand for your products / services	Construction		82.1%	17.9%
	Trade	6.8%	74.5%	18.8%
	Market Services	17.9%	4.2%	77.9%
	Financial Intermediation	9.2%	36.2%	54.6%
	Business Services	8.9%	56.0%	35.1%
	Manufacturing	18.6%	34.4%	47.0%
<b>.</b>	Construction	8.5%	66.7%	24.8%
Due to volatility / uncertainty of demand for your products /	Trade	4.2%	73.9%	21.9%
oj demana jor your products / services	Market Services	12.8%	24.5%	62.7%
Services	Financial Intermediation			100.0%
	Business Services	7.5%	52.3%	40.2%
	Manufacturing		66.7%	33.3%
	Construction		38.0%	62.0%
Due to changes in access to	Trade	15.1%	63.0%	21.9%
finance (not from own funds)	Market Services	15.6%	21.4%	63.0%
	Financial Intermediation		100.0%	
	Business Services	14.9%	54.9%	30.2%
	Manufacturing	11.6%	57.2%	31.2%
	Construction		67.6%	32.4%
Due to changes in customers' ability to pay and meet	Trade	14.8%	62.1%	23.1%
contractual obligations	Market Services	39.2%	7.6%	53.3%
contractadi obligations	Financial Intermediation		24.8%	75.2%
	Business Services	9.3%	74.6%	16.1%
	Manufacturing	20.8%	79.2%	
	Construction		78.4%	21.6%
Due to changes in availability	Trade	11.6%	66.3%	22.1%
of supplies from your usual suppliers	Market Services			100.0%
suppliers	Financial Intermediation			
	Business Services		100.0%	

Evolution of prices and demand	Sectors	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase	Size	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase
	Manufacturing	45.4%	34.4%	17.8%	2.4%		03_04	44.6%	38.1%	14.5%	2.9%	
Domestic	Construction	84.4%	9.4%	6.2%			05_19	38.6%	42.2%	11.3%	6.7%	1.2%
demand for your	Trade	30.1%	46.6%	13.4%	9.8%		20_49	21.9%	47.7%	19.2%	11.2%	
main product /	Market Services	36.3%	50.5%	12.1%	0.4%	0.7%	50_199	13.2%	35.3%	30.5%	21.0%	
service	Financial Intermediation	32.4%	5.4%	26.7%	35.5%		over_199	12.4%	13.1%	15.7%	43.1%	15.7%
	Business Services	22.6%	50.4%	17.4%	5.9%	3.7%						
	Manufacturing	25.7%	15.9%	54.2%	2.0%	2.2%	03_04	22.3%	26.8%	50.9%		
Frankright and	Construction	56.1%	0.2%	39.8%	3.8%		05_19	20.5%	21.7%	51.8%	6.0%	
Foreign demand	Trade	12.6%	12.1%	72.7%	2.6%		20_49	23.6%	2.4%	65.0%	7.0%	2.0%
for your main product / service	Market Services	17.2%	50.2%	31.9%		0.7%	50_199	5.7%	28.9%	58.5%	3.5%	3.4%
producty service	Financial Intermediation			68.3%	31.7%		over_199	1.7%	3.4%	26.1%	48.7%	20.2%
	Business Services	19.3%	29.6%	43.1%	8.0%							
	Manufacturing	27.0%	30.3%	25.3%	17.4%		03_04	26.6%	47.5%	15.7%	10.2%	
Prices of your	Construction	75.0%	18.8%	6.2%			05_19	28.1%	31.1%	30.8%	8.7%	1.3%
main product / service in	Trade	6.2%	48.7%	24.8%	18.8%	1.5%	20_49	22.5%	24.4%	36.6%	16.4%	
domestic	Market Services	41.8%	27.8%	29.4%	0.4%	0.7%	50_199	10.3%	29.9%	31.4%	28.5%	
markets	<b>Financial Intermediation</b>			84.5%	15.5%		over_199	11.8%	15.0%	34.0%	23.5%	15.7%
	Business Services	20.9%	50.8%	23.4%	4.8%							
	Manufacturing	15.1%	14.7%	65.7%	4.5%		03_04	11.0%	39.7%	45.7%	3.7%	
Prices of your	Construction	48.1%	12.0%	39.8%			05_19	17.5%	21.3%	52.9%	5.5%	2.8%
main product /	Trade	6.3%	16.8%	64.2%	8.9%	3.9%	20_49	21.0%	14.3%	57.8%	6.9%	
service in foreign	Market Services	17.1%	52.9%	29.1%	0.2%	0.7%	50_199	5.7%	6.9%	74.7%	12.6%	
markets	Financial Intermediation			91.8%	8.2%		over_199	1.9%	26.0%	7.7%	41.3%	23.1%
	Business Services	8.5%	41.9%	41.2%	8.4%							

Financial		Not	Of little		Very
Constrains	Sectors	relevant	relevance	Relevant	relevant
	Manufacturing	32.30%	20.90%	37.10%	9.70%
Credit was not	Construction	11.50%	13.20%	29.60%	45.70%
available to finance	Trade	53.10%	11.60%	23.90%	11.40%
working	Market Services	29.50%	13.40%	17.30%	39.90%
capital	Financial Intermediation	94.00%	6.00%	0.00%	0.00%
	Business Services	62.20%	13.40%	7.20%	17.10%
	Manufacturing	36.90%	22.90%	29.80%	10.40%
Credit was not	Construction	19.30%	7.20%	22.90%	50.60%
available to	Trade	54.30%	15.20%	14.90%	15.60%
finance new	Market Services	24.00%	19.90%	15.60%	40.50%
investment	Financial Intermediation	94.00%	6.00%	0.00%	0.00%
	Business Services	68.40%	7.30%	1.10%	23.30%
	Manufacturing	47.90%	20.20%	23.20%	8.70%
	Construction	17.90%	14.40%	23.00%	44.70%
Credit was not available to	Trade	51.90%	15.20%	15.30%	17.60%
refinance debt	Market Services	33.80%	25.70%	24.00%	16.40%
Termanee debt	Financial Intermediation	70.60%	29.40%	0.00%	0.00%
	Business Services	76.50%	6.10%	5.00%	12.40%
Credit was	Manufacturing	53.50%	17.70%	13.00%	15.80%
available to	Construction	19.30%	5.60%	35.50%	39.60%
finance	Trade	41.30%	6.90%	38.20%	13.60%
working capital & with	Market Services	24.70%	44.60%	22.80%	7.80%
strict credit	Financial Intermediation	64.80%	0.00%	35.20%	0.00%
conditions	Business Services	53.80%	23.00%	3.60%	19.60%
Credit was	Manufacturing	50.70%	13.80%	20.40%	15.10%
available to	Construction	26.40%	5.40%	23.00%	45.20%
finance new	Trade	46.30%	10.60%	34.20%	9.00%
investment but with strict	Market Services	59.10%	18.90%	14.20%	7.80%
but with strict	Financial Intermediation	64.80%	0.00%	35.20%	0.00%
conditions	Business Services	60.40%	21.40%	3.60%	14.60%
Credit was	Manufacturing	55.20%	14.50%	15.10%	15.10%
available to	Construction	19.50%	5.40%	30.10%	45.00%
refinance debt	Trade	53.20%	8.80%	25.20%	12.80%
but with strict	Market Services	67.10%	8.60%	14.90%	9.50%
credit	Financial Intermediation	64.80%	23.50%	11.70%	0.00%
conditions	Business Services	62.40%	18.00%	3.60%	15.90%

	Not	Of little	Relevant	Very
Size	relevant	relevance	Nelevant	relevant
03-04	42.60%	10.40%	22.10%	24.90%
05-19	45.00%	15.80%	21.00%	18.30%
20-49	44.20%	17.80%	20.10%	17.90%
50-199	30.20%	5.30%	39.40%	25.20%
over 199	34.10%	63.00%	0.00%	2.90%
03-04	46.00%	14.00%	9.40%	30.60%
05-19	46.90%	14.60%	20.10%	18.40%
20-49	37.60%	24.40%	15.00%	23.00%
50-199	33.10%	5.30%	33.40%	28.20%
over 199	34.10%	34.10%	11.60%	20.30%
03-04	44.10%	23.80%	14.20%	17.90%
05-19	52.40%	10.60%	17.20%	19.80%
20-49	51.30%	22.00%	15.50%	11.20%
50-199	42.80%	0.00%	54.80%	2.40%
over 199	39.10%	58.00%	0.00%	2.90%
	-	-	-	
03-04	36.80%	17.50%	28.80%	17.00%
05-19	43.20%	16.40%	24.00%	16.30%
20-49	46.10%	31.40%	13.30%	9.10%
50-199	34.30%	6.70%	39.90%	19.10%
over 199	8.70%	72.50%	17.40%	1.40%
	<b>_</b>	1	L	
03-04	53.80%	9.00%	24.60%	12.50%
05-19	47.00%	14.90%	20.50%	17.60%
20-49	58.10%	21.50%	11.30%	9.10%
50-199	34.30%	20.30%	43.00%	2.40%
over 199	35.50%	60.10%	0.00%	4.30%
0Vei 199	33.30%	00.10%	0.00%	4.30%
	54.000/	0.40%	40.000/	40.000/
03-04	54.20%	8.10%	19.30%	18.30%
05-19	54.20%	11.90%	17.50%	16.40%
20-49	67.10%	12.70%	11.10%	9.10%
50-199	37.40%	23.40%	36.80%	2.40%
over 199	34.10%	64.50%	0.00%	1.40%

Sector / Firm	Very	Sector / Firm	Very
breakdown	relevant	breakdown	relevant
Construction	45.7%	Market Services	39.9%
03-04	19.6%	03-04	28.4%
05-19	19.9%	05-19	10.4%
20-49	3.1%	20-49	0.6%
50-199	3.1%	50-199	0.4%
over 199	0.0%	over 199	0.0%
Construction	50.6%	Market Services	40.5%
03-04	14.0%	03-04	28.4%
05-19	26.6%	05-19	10.4%
20-49	6.7%	20-49	0.6%
50-199	3.3%	50-199	0.4%
over 199	0.0%	over 199	0.7%
Construction	44.7%	Market Services	16.4%
03-04	14.2%	03-04	5.0%
05-19	27.1%	05-19	10.4%
20-49	3.4%	20-49	0.6%
50-199	0.0%	50-199	0.4%
over 199	0.0%	over 199	0.0%
Construction	39.6%	Market Services	7.8%
03-04	7.1%	03-04	5.0%
05-19	32.5%	05-19	2.4%
20-49	0.0%	20-49	0.0%
50-199	0.0%	50-199	0.4%
over 199	0.0%	over 199	0.0%
Construction	45.2%	Market Services	7.8%
03-04	7.1%	03-04	5.0%
05-19	37.9%	05-19	2.4%
20-49	0.0%	20-49	0.0%
50-199	0.0%	50-199	0.4%
over 199	0.2%	over 199	0.0%
Construction	45.0%	Market Services	9.5%
03-04	7.1%	03-04	6.6%
05-19	37.9%	05-19	2.4%
20-49	0.0%	20-49	0.0%
50-199	0.0%	50-199	0.4%
over 199	0.0%	over 199	0.0%

Total costs and its components	Sectors	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase		Firm Size	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	
· ·	Manufacturing	35.0%	24.6%	13.9%	25.0%	1.4%				•	•		
	Construction	37.6%	34.1%	21.9%	6.4%	0.0%		03_04	13.4%	35.2%	22.3%	24.1%	
	Trade	5.8%	51.4%	24.9%	13.1%	4.9%		05_19	14.5%	47.3%	16.3%	20.7%	
Total Costs	Market Services	9.4%	38.1%	2.4%	45.1%	4.9%		20_49	16.4%	39.0%	8.5%	36.2%	
	Financial Intermediation	0.0%	5.3%	31.7%	62.9%	0.0%		50_199	6.2%	43.7%	0.0%	44.3%	
	Business Services	3.3%	51.0%	16.0%	29.8%	0.0%		over_199	7.2%	57.2%	1.4%	34.1%	
	Manufacturing	27.9%	27.4%	24.0%	20.7%	0.0%							
	Construction	32.6%	27.5%	35.3%	4.7%	0.0%		03_04	11.2%	24.7%	40.5%	13.5%	
	Trade	8.0%	33.3%	36.7%	22.0%	0.0%		05_19	16.5%	37.5%	22.0%	22.8%	
Labour Costs	Market Services	9.7%	25.8%	16.9%	23.6%	23.9%		20_49	12.1%	49.3%	6.2%	30.8%	
	Financial Intermediation	0.0%	5.3%	52.7%	41.9%	0.0%	Г	50_199	12.2%	40.0%	0.0%	43.6%	
	Business Services	7.8%	57.6%	13.2%	16.7%	4.6%		over_199	21.7%	45.7%	27.5%	5.1%	
	Manufacturing	7.4%	15.3%	56.5%	20.8%	0.0%							
	Construction	15.7%	11.1%	45.0%	17.2%	11.0%		03_04	5.9%	10.3%	49.2%	9.5%	
Financing	Trade	0.0%	13.1%	48.4%	24.9%	13.6%		05_19	5.3%	13.3%	49.7%	24.3%	
Costs	Market Services	7.6%	12.7%	33.8%	8.0%	37.8%		20_49	4.8%	8.9%	47.0%	37.7%	
	Financial Intermediation	22.2%	5.4%	39.1%	27.8%	5.4%		50_199	2.9%	32.9%	25.0%	32.0%	
	Business Services	2.4%	10.8%	62.5%	16.8%	7.4%		over_199	11.6%	30.4%	5.1%	34.1%	
	Manufacturing	20.2%	47.6%	13.0%	17.5%	1.7%							
	Construction	11.7%	33.5%	34.9%	14.9%	5.1%	Г	03_04	11.1%	24.2%	43.6%	10.6%	
Cost of	Trade	6.4%	31.2%	42.2%	18.7%	1.5%		05_19	7.2%	38.0%	26.3%	24.4%	
Supplies	Market Services	7.9%	24.3%	26.9%	16.3%	24.7%	Γ	20_49	4.7%	20.9%	50.6%	20.2%	
	Financial Intermediation	0.0%	0.0%	50.0%	27.8%	22.2%	Γ	50_199	0.0%	37.4%	22.5%	37.2%	
	Business Services	2.3%	25.7%	48.4%	23.6%	0.0%	Г	over_199	9.3%	23.1%	37.0%	30.6%	
	Manufacturing	0.0%	20.3%	72.6%	3.6%	3.6%							
	Construction	13.9%	22.6%	36.5%	8.8%	18.2%	Г	03_04	5.5%	19.0%	62.5%	4.6%	
Other Costs	Trade	0.0%	22.6%	60.8%	8.0%	8.6%		05_19	5.1%	8.2%	55.3%	21.0%	
Other Costs	Market Services	16.0%	4.7%	39.4%	22.6%	17.3%	Γ	20_49	0.0%	10.6%	65.9%	18.3%	
	Financial Intermediation	0.0%	0.0%	100.0%	0.0%	0.0%	Γ	50_199	0.0%	81.1%	7.6%	11.3%	
	Business Services	4.2%	7.7%	67.4%	20.7%	0.0%		over_199	0.0%	0.0%	0.0%	100.0%	

Labour Cost Components	Sectors	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase
	Manufacturing	11.5%	38.6%	33.8%	16.1%	0.0%
	Construction	24.5%	35.4%	35.5%	4.7%	0.0%
Base wages or	Trade	3.1%	36.7%	42.6%	16.1%	1.5%
piece work rates	Market Services	12.0%	43.3%	26.5%	18.1%	0.0%
	Financial Intermediation	0.0%	5.2%	51.0%	40.6%	3.2%
	Business Services	1.3%	50.6%	31.2%	16.9%	0.0%
	Manufacturing	14.7%	34.6%	41.6%	9.0%	0.0%
Flexible wage	Construction	25.7%	27.3%	47.0%	0.0%	0.0%
components	Trade	9.3%	26.1%	58.7%	5.9%	0.0%
(bonuses, fringe	Market Services	36.8%	22.7%	23.9%	16.5%	0.0%
benefits, etc.)	Financial Intermediation	0.0%	5.2%	81.5%	13.4%	0.0%
	Business Services	9.4%	27.6%	58.7%	4.3%	0.0%
	Manufacturing	31.0%	30.6%	36.0%	0.7%	1.7%
	Construction	36.8%	35.5%	27.7%	0.0%	0.0%
Number of Permanent	Trade	10.7%	23.2%	53.9%	12.1%	0.0%
employees	Market Services	29.7%	33.6%	29.1%	7.5%	0.0%
employees	Financial Intermediation	0.0%	30.7%	50.8%	15.3%	3.2%
	Business Services	5.9%	33.6%	37.8%	21.7%	1.1%

Firm Size	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase
03_04	5.0%	37.4%	47.6%	9.9%	0.0%
05_19	10.9%	36.2%	32.6%	19.1%	1.2%
20_49	10.3%	61.9%	10.4%	17.4%	0.0%
50_199	6.7%	45.5%	0.0%	47.8%	0.0%
over_199	10.1%	44.9%	3.8%	27.2%	13.9%
03_04	21.7%	17.0%	59.3%	2.1%	0.0%
05_19	10.9%	31.7%	45.6%	11.9%	0.0%
20_49	27.2%	42.6%	15.4%	14.7%	0.0%
50_199	15.4%	34.1%	40.2%	10.3%	0.0%
over_199	6.5%	52.9%	26.1%	14.4%	0.0%
03_04	23.1%	20.7%	51.7%	4.5%	0.0%
05_19	14.2%	37.4%	39.0%	9.4%	0.0%
20_49	30.7%	33.6%	12.5%	21.3%	1.9%
50_199	9.5%	28.0%	7.6%	48.0%	7.0%
over_199	32.5%	25.6%	4.4%	23.8%	13.8%

Labour Force Adjustments	Sectors	Not at all	Marginally	Moderately	Strongly
	Manufacturing	24.3%	47.4%	26.5%	1.8%
	Construction	14.7%	17.8%	27.5%	39.9%
	Trade	25.0%	45.6%	16.9%	12.5%
Individual Layoffs	Market Services	52.6%	41.7%	5.0%	0.7%
	Financial Intermediation	39.8%	60.2%		
	Business Services	8.3%	66.9%	20.3%	4.5%
	Manufacturing	25.4%	28.9%	1.6%	44.1%
	Construction	16.4%	19.8%	8.4%	55.4%
Freeze or reduction	Trade	53.6%	20.6%	4.5%	21.4%
of new hires	Market Services	44.3%	26.0%	25.7%	3.9%
	Financial Intermediation	100.0%			
	Business Services	31.2%	24.2%	12.3%	32.4%

Firm Size	Not at all	Marginally	Moderately	Strongly
03_04	49.8%	35.5%	9.8%	5.0%
05_19	15.1%	53.9%	19.0%	12.0%
20_49	45.1%	14.5%	18.9%	21.6%
50_199	5.6%	47.2%	33.5%	13.6%
over_199	15.9%	47.6%	36.5%	
03_04	61.9%	19.9%		18.2%
05_19	29.6%	24.4%	18.6%	27.4%
20_49	34.4%	33.4%	9.9%	22.4%
50_199	24.2%		5.6%	70.3%
over_199		44.4%	14.3%	41.3%
	-	-		

### Average wage cut of companies proceeding with this policy

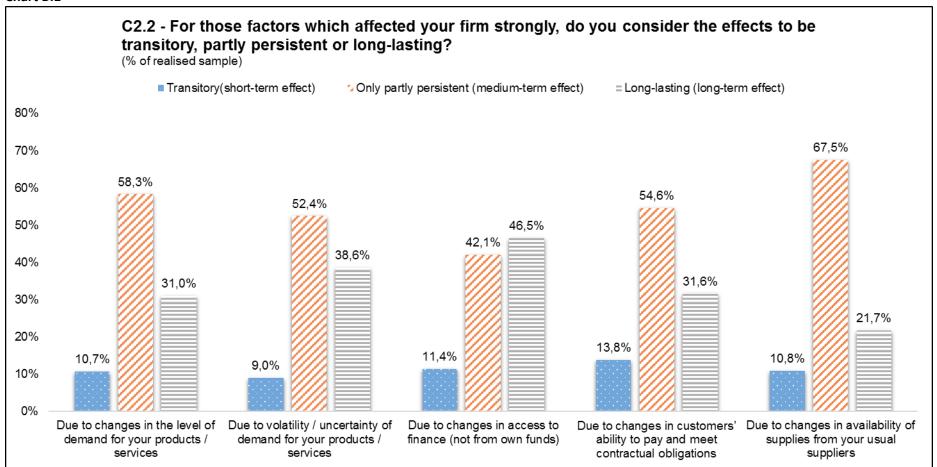
(by firm size)

Year	03_04	05_19	20_49	50_199	over_199
2010	5,0%	10,0%			
2011	12,5%	7,1%	15,0%	15,0%	
2012	21,5%	12,2%	15,4%	3,7%	
2013	24,9%	16,7%	18,6%	6,2%	8,2%

	ion experienced in the domestic and arkets for your main product / service	Weak	Moderate	Intense	Very intense	Not applicable
	Manufacturing Sector	1,9%	15,8%	34,0%	41,3%	7,0%
	Construction Sector		9,3%	16,9%	69,1%	4,7%
Domestic	Trade Sector		21,0%	47,3%	24,1%	7,6%
market	Market Services Sector	4,1%	10,4%	43,5%	29,8%	12,2%
	Financial Intermediation Sector			16,7%	61,1%	22,2%
	<b>Business Services Sector</b>	2,4%	24,8%	28,2%	36,9%	7,8%
	Manufacturing Sector		17,7%	16,1%	23,3%	42,9%
	Construction Sector		5,6%	13,0%	14,9%	66,4%
Foreign	Trade Sector	10,1%	16,3%	5,8%	10,9%	56,8%
markets	Market Services Sector		10,6%	20,3%	25,0%	44,1%
	Financial Intermediation Sector				29,3%	70,7%
	Business Services Sector		13,7%	19,4%	34,1%	32,7%

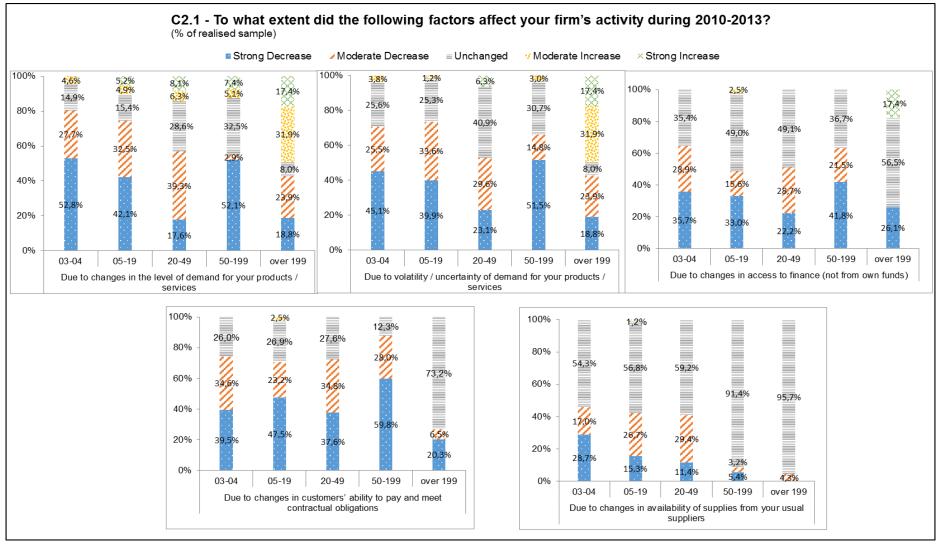
foreign m	Competition experienced in the domestic and foreign markets for your main product / service over period 2010-2013		Moderate decrease	Unchanged	Moderate increase	Strong increase	Not applicable
	Manufacturing Sector		13,9%	17,8%	10,0%	51,3%	7,0%
	Construction Sector	6,1%	15,5%	9,3%	6,1%	58,3%	4,7%
Domestic	Trade Sector	5,3%	10,3%	17,1%	18,3%	44,7%	4,2%
market	Market Services Sector	0,6%	12,4%	31,7%	22,9%	24,6%	7,7%
	Financial Intermediation Sector			5,6%	5,6%	66,5%	22,2%
	<b>Business Services Sector</b>	8,4%	9,1%	20,0%	21,4%	30,4%	10,6%
	Manufacturing Sector		8,8%	13,7%	16,1%	14,5%	46,8%
	Construction Sector	5,6%	13,0%			14,9%	66,4%
Foreign	Trade Sector			24,1%	9,3%	4,4%	62,2%
markets	Market Services Sector		18,0%	22,7%	1,7%	16,5%	41,1%
	Financial Intermediation Sector					23,5%	76,5%
	Business Services Sector	6,4%	5,7%	12,9%	17,7%	21,2%	36,1%

### **Appendix B: Charts**



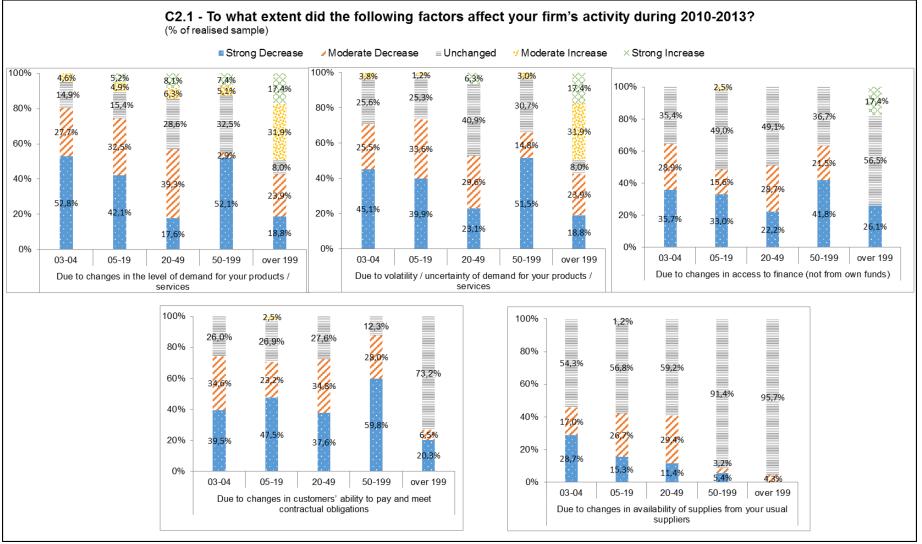
#### Chart B.1





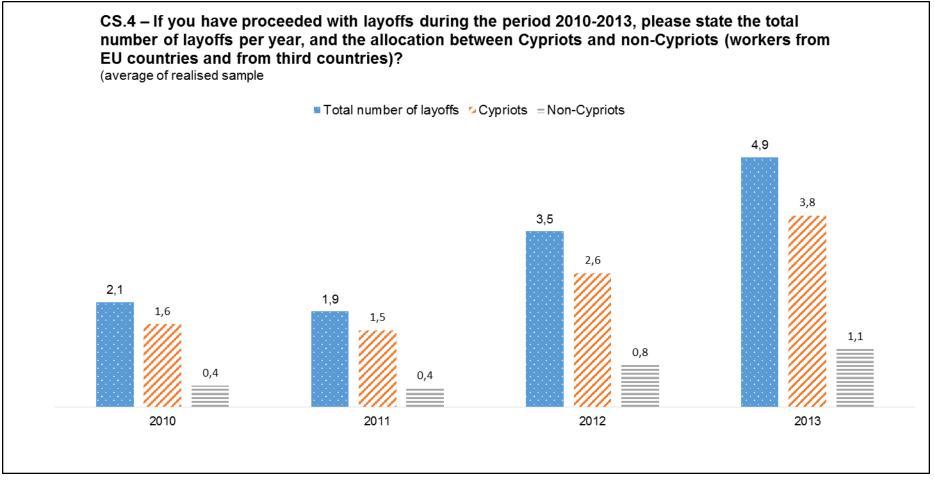
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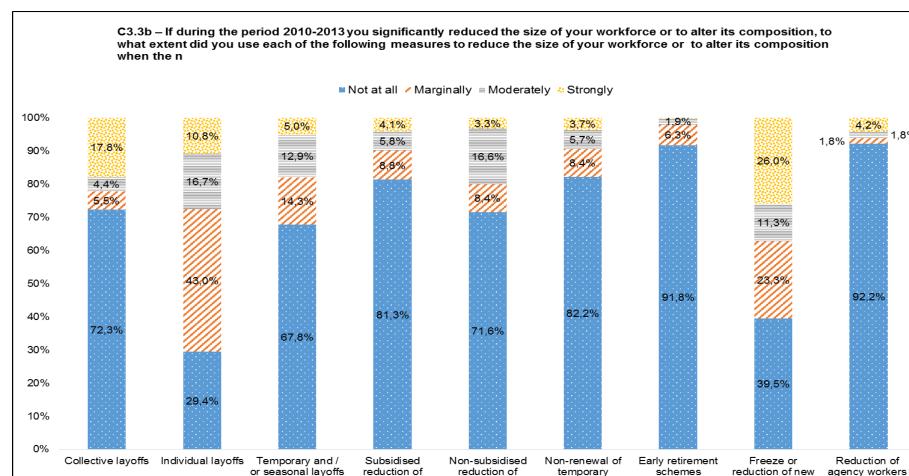




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working hours

Chart B.4

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working hours

(including

reduction of overtime)

contracts at

expiration

**4,2%** 1,8%

92,2%

Reduction of

and others

hires

1.8%

**Appendix C: Questionnaire** 

# WAGE AND PRICE SETTING PRACTICES OF CYPRIOT COMPANIES DURING THE PERIOD 2010-2013

### C.1. Information about the firm

#### C1.1 – What is your main sector of activity, according to NACE Rev. 2 classification?

Economic sector: \_\_\_\_\_ (COMPLETED BY CBC)

### C1.2 – What was the first year of operation of your firm?

First year of operation: \_\_\_\_

### C1.3 – What was the structure, ownership and autonomy status of your firm at the end of 2013?

Structure:		Ownership:	Autonomy:		
Single establishment firm		Domestic by majority	Parent company		
			Subsidiary / affiliate		
Multi-establishment firm		Foreign by majority	Enterprise of other kind		

### C2. Changes in the economic environment

This section aims at assessing the main changes in economic environment your firm experienced during 2010-2013.

C2.1 – To what extent did the following factors affect your firm's activity during 2010-2013? Please choose <u>ONE option for each line.</u>							
Your firm's activities experienced:	Strong Decrease	Moderate Decrease	Unchanged	Moderate Increase	Strong Increase		
Due to changes in the level of demand for your products / services							
Due to volatility / uncertainty of demand for your products / services							
Due to changes in access to finance (not from own funds)							
Due to changes in customers' ability to pay and meet contractual obligations							
Due to changes in availability of supplies from your usual suppliers							

# C2.2 – For those factors which affected your firm STRONGLY (strong decrease or strong increase according to question C2.1), do you consider the effects to be transitory, partly persistent or long-lasting?

Please choose <u>ONE option for each line.</u>

	Transitory (short term effect)	Only partly persistent (medium term effect)	Long-lasting (long term effect)
The change in the level of demand for your products / services			
The volatility / uncertainty of demand for your products / services			
The change in access to finance (not from own funds)			
The change in customers' ability to pay and meet contractual obligations			
The change in availability of supplies from your usual suppliers			

C2.3 – With regard to financing, please indicate for 2010-2013 how relevant were for your firm each one of the following factors? (Please choose <u>ONE option for each line</u> taking into account all types of financing, not just bank financing. Credit terms include borrowing costs and other contractual obligations)

	Not relevant	Of little relevance	Relevant	Very relevant
Credit was not available to finance working capital				
Credit was not available to finance new investment				
Credit was not available to refinance debt				
Credit was available to finance working capital but with strict credit conditions				
Credit was available to finance new investment but with strict credit conditions				
Credit was available to refinance debt but with strict credit conditions				

CS.1 – During 2010-2013, what percentage of the value of your transactions with customers and suppliers was conducted each year with cash, and what percentage with agreed credit? (Please provide an approximate figure so that both percentages add up to 100% and take into account only new transactions for each year separately)

	CUSTOMERS			SUPPLIERS			
	Cash	Credit	Total	Cash	Credit	Total	
2010	%	%	=100%	%	%	=100%	
2011	%	%	=100%	%	%	=100%	
2012	%	%	=100%	%	%	=100%	
2013	%	%	=100%	%	%	=100%	

	Strong	Moderate	Unchanged	Moderate	Strong
	decrease	decrease		increase	increase
Total costs					
_abour Costs					
Financing costs					
Cost of supplies					
Other costs (Please specify					

# C2.5 – Please indicate how each one of the components of labour costs listed below has changed during 2010-2013. (Please choose <u>ONE option for each line</u>. Definitions of costs components are given in the Appendix)

	Strong decrease	Moderate decrease	Unchanged	Moderate increase	Strong increase
Base wages or piece work rates					
Flexible wage components (bonuses, fringe benefits, etc.)					
Number of permanent employees					
Number of temporary / fixed-term employees					
Number of agency workers					
Working hours per employee					
Other components of labour costs (Please specify					

## C2.6 – How did prices and demand for your main product / service evolve during 2010-2013? *Please choose <u>ONE option for each line.</u>*

	Strong decrease	Moderate decrease	Unchanged	Moderate increase	Strong increase
Domestic demand for your main product / service					
Foreign demand for your main product / service					
Prices of your main product / service in domestic markets					
Prices of your main product / service in foreign markets					

# CS.2 – What are your preliminary estimates regarding the annual rate of change of the following variables for the year 2014 and what are your forecasts for 2015? (Please either report with a positive or negative sign the relevant change or include zero (0%) in the case of no change.)

•							
	Turnover	Number of employees	Working hours per employee	Total salary			
2014	%	%	%	%			
2015	%	%	%	%			

	C3. Labour force adjustments					
C3.1 – Nui	mber and composition of the workforce of	your company a	t the end c	of 2013 (For defined	nitions see Appen	dix.)
Total numb	per of employees					
Of which:						
Permanent	full-time					
Permanent	part-time					
Temporary	/ fixed term					
Agency wo	rkers and others					
definitions	he end of 2013, how were your firm's emp s of the ISCO occupational groups and the		ure in the <i>l</i>	Appendix)	ational group and	tenure? (See
	IONAL GROUPS	0/	JOB TEN		0/	
U	led non-manual (ISCO: 1, 2, 3) ed non-manual (ISCO: 4 και 5)	% %	Below 1 y Between	1 and 5 years	% %	
	led manual (ISCO: 7 και 8)	%	More that	-	%	
Lower skill	, , , , , , , , , , , , , , , , , , ,	%				
TOTAL (= 100%) TOTAL (= 100%) CS.3 – During the period 2010-2013, what was the distribution of your company's workforce by nationality per year (please						
state num	· · ·		ur compa	ny s workforder	sy nationality per	year (piease
	Cypriots	E	U nationals	6	National of thire	d countries
2010 2011						
2012						
2013	 Iring the period 2010-2013, did you need to	cignificantly rod		zo of your workf	orco or to altor its	
	cupational groups?	significantly red	iuce the si			composition
Reduce the	e number of employees		YES 🗆		NO	
Change co group	mposition of workforce by occupational		YES 🗆		NO	
	YES, to what extent did you use each of t on when the need to do so it was most u					
		Nc	ot at all	Marginally	Moderately	Strongly
Collective I	ayoffs					
Individual I	ayoffs					
Temporary	and / or seasonal layoffs					
	reduction of working hours					
Non-subsic reduction c	lised reduction of working hours (including f overtime)					
Non-renew	al of temporary contracts at expiration					
Early retire	ment schemes					
Freeze or r	eduction of new hires					
Reduction	of agency workers and others					

# C3.4 – To what extent have each of the following actions become more or less difficult, compared to the situation in 2010? *Please choose <u>ONE option for each line.</u>*

	Much less difficult	Less difficult	Unchanged	More difficult	Much More difficult
To lay off employees for economic reasons (collectively)					
To lay off employees for economic reasons (individually)					
To dismiss employees for disciplinary reasons					
To lay off employees temporarily for economic reasons					
To hire employees (administrative cost of recruitment)					
To adjust working hours					
To move employees to positions in other locations					
To move employees across different job positions					
To adjust wages of incumbent employees					
To lower wages at which you hire new employees					

CS.4 – If you have proceeded with layoffs during the period 2010-2013, please state the total number of layoffs per year, and the allocation between Cypriots and non-Cypriots (workers from EU countries and from third countries)?

	Total number of layoffs	Cypriots	Non-Cypriots
2010			
2011			
2012			
2013			
	you have any vacancies which you	intend to cover?	1
	you have any vacancies which you	intend to cover?	
CS.5a – Currently, do			
CS.5a – Currently, do Yes	occur shortly		

# C3.5 To what extent have each of the following factors hindered the hiring of workers with a permanent contract? *Please choose <u>ONE option for each line.</u>*

	Not at all	Marginally	Moderately	Strongly
Uncertainty about economic conditions				
Insufficient availability of labour with the required skills				
Access to finance				
Firing costs				
Hiring costs				
High level of employer's social contributions				
High level of wages				
Risk that labour laws are changed				
Costs of other inputs complementary to labour				
Other (please specify)				

### NC3.6a – Compared to 2010, worker flows (number of entries plus number of exits) in your firm in 2013:

Decreased strongly	Decreased moderately	Remained unchanged	Increased moderately	Increased strongly
NC3.6b – If worker flow	s have registered a STRO	NG change (strong decre	ase or strong decrease), t	hen this is due to:

# Changes in entries Changes in exits Changes in both entries and exits (increase or decrease) (increase or decrease) □

### CS.6 – Is your company benefiting or has benefited from participation in government schemes aimed at boosting employment?

No	
Yes, from the "Scheme for job placement of young unemployed tertiary education graduates for the acquisition of work experience in enterprises / organisations"	
Yes, from the "Scheme to support youth unemployment"	
Yes, from the "Scheme providing incentives for the employment of long-term unemployed and the young'	
Yes, from the "Flexible forms of employment subsidy scheme"	
Yes, from the "Scheme for the enhancement of youth entrepreneurship"	
Yes, from the "Subsidised employment scheme for the Hotel, Food and Tourism industry"	
Yes, from another government programme (please specify	

### C.4 Wage Adjustments

This section aims to collect information on wage setting practices and the frequency of wage changes. Most of the questions refer to the year 2013, but some questions aim at assessing differences in practices between the period before 2010 and 2010-2013.

C4.1 – In 2013: What percentage of your firm's total costs (all operating expenses) was due to labour costs (wages, salaries, bonuses, social security contributions, training, tax contributions, contributions to pension funds, etc.)? See definitions in the Appendix.

Labour costs / Total operating expenses \_\_\_\_\_ %

C4.2 – What percentage of your total labour cost in 2013 was related to individual or company performance related bonuses and benefits?

Labour costs associated with performance / Total labour cost \_\_\_\_\_\_ %

C4.3a – In 2013, did your company apply a collective pay agreement bargained and signed either within the company (at company level) or outside the company (at sectoral level)?						
	At company level	At sectoral level				
No, such an agreement does not exist						
No, the agreement exists but the company opted-out						
Yes, such an agreement is in effect						

C4.3b – What is the proportion of your employees that was covered by any collective pay agreement at the end of 2013?

Proportion of employees covered by any collective pay agreement (approx.)

\_\_\_%

#### C4.4 – 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	Never	Not applicable	

C4.5 – Did your firm adapt changes in base wages to inflation before 2010? What was applicable during 2010-2013? *Please choose ONE option for each column.* 

	Before 2010	During 2010-2013
Yes		
No, because inflation was too low so that indexation rules could not be applied		
No, because there are no legal or other types of indexation rules specifying such an arrangement		
No, for other reasons (please specify)		

C4.6 – How frequently did the base wage of an employee belonging to the main occupational group in your firm (largest group as defined in Question C3.2) typically change in your firm? *Please choose <u>ONE option for each line</u>.* 

	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
Before 2010							
During 2010-2013							

C4.7 – Over 2010-2013, how did base wages evolve (please respond for each year separately)?									
	Base wages v	were frozen		Base wages were increased					
	YES	% workers affected	YES	% workers affected	Average wage cut	YES			
2010		%		%	%				
2011		%		%	%				
2012		%		%	%				
2013		%		%	%				
experience and jo		firm?	ower	Similar	bent worker with sir	Much higher			
Before 2010									
During 2010-2013									
CS.7a During the p costs? (please res			t workers been rep	laced with non-Cyp	riots, namely becaus	se of lower labou			
	YE	S	NO		Not applicable				
2010	C	]							
2011 🗆									
2012	2012								
2013									

### **C5.** Price setting and price changes

This section aims at collecting information on price setting practices and the frequency of price changes. Some questions aim at assessing differences in price setting practices over 2010-2013 with respect to the period before 2010.

Responses should relate to the main product / service, i.e. that which generated the highest share of your firm's revenue in the year under consideration according to each question.

CS8 –How did the prices of your main product / service evolve during the period 2010-2013? Responses should take into account both domestic and foreign markets (please respond for each year separately).

	Prices remained constant	Prices declined		Prices increased
	YES	YES	Average price reduction	YES
2010			%	
2011			%	
2012		□%		
2013	2013 🛛		%	

Sales in the domestic market
------------------------------

Sales to foreign markets

NC5.4 – How would you characterise the degree of competition experienced in the domestic and foreign markets for your main product / service? *Please choose <u>ONE option for each line</u>* 

%

%

	Weak	Moderate	Intense	Very intense	Not applicable
Domestic market					
Foreign markets					

NC5.5 – Compared to the situation before 2010, how did the degree of competition for your main product / service in the domestic and foreign markets change in the period 2010-2013? <u>Please choose ONE option for each line.</u>

	Strong decrease	Moderate decrease	Unchanged	Moderate increase	Strong increase	Not applicable
Domestic market						
Foreign markets						

### <u>Appendix</u>

### Question C1.3

**Parent Enterprise:** An incorporated or unincorporated enterprise, or group of enterprises, which has a direct investment enterprise operating in a country other than that of the parent enterprise.

Affiliate Enterprise: An incorporated or unincorporated enterprise in which a foreign investor has an effective voice in management. Such an enterprise may be a subsidiary, associate or branch.

**Subsidiary Enterprise:** An incorporated enterprise in the host country in which another entity directly owns more than half of the shareholders' voting power, or is a shareholder in the enterprise, and has the right to appoint or remove a majority of the members of the administrative, management or supervisory body.

### Question C2.4

**Total costs:** all operating expenses, e.g. include telecommunications, insurance and maintenance of building and equipment, utility expenses, travelling and other miscellaneous expenses

Finance costs: interest payment costs and other charges relating to borrowings

Cost of supplies: costs affecting the products or services of the company and include the cost of goods, materials and services.

### **Question C2.5**

Labour costs: wages, salaries, bonuses, social contributions, training, tax contributions, contributions to pension funds. From the employers point of view these are often grouped as: direct remuneration (direct pay for time worked and bonuses); other direct cost (payments in kind, payment in capital and remuneration for non-working days); indirect cost (soc. sec. contributions, vocational training and miscellaneous taxes

**Base wage** - direct remuneration excluding bonuses (regular wage and salary, commissions, piecework payments). **Total wage** – direct remuneration including bonuses

**Bonuses / benefits** (flexible wage components) - part of compensation different from the base wage and usually linked to individual's performance or firm's performance

Hourly, piece-rate and monthly base wage - base wage per hour worked, per month worked, or per pieces produced.

#### Question C2.5 & C3.1

**Employees –** Include all type of employees, i.e. those with employment contracts. Agency worker and freelance are excluded **Permanent full-time -** Those with employment contracts that do not set a termination date, and whose regular working hours are the same as the collectively agreed or customarily worked.

**Permanent part-time -** Those with employment contracts that do not set a termination date, and whose regular working hours are less than those specified for permanent full-time.

**Temporary or Fixed-Term:** Those with employment contracts that set a termination date or a specific period of employment. **Agency workers and others:** Theses are workers and employees **not** on the payroll of the firm, such as consultants, employees being officially registered with a different company, etc.

### **Question C2.6**

Main product: Refers to the product which highly contributes as a percentage into the firms revenue

### Question C3.2

**Occupational categories:** 

#### ISCO-08 Structure, Group Titles and Codes

**Major Groups** 

- 1 Managers
- 2 Professionals
- 3 Technicians and associate professionals
- 4 Clerical support workers
- 5 Service and sales workers
- 7 Craft and related trades workers
- 8 Plant and machine operators, and assemblers
- 9 Elementary occupations

**Job Tenure** Job tenure (OECD definition) is typically measured by the length of time workers have been in their current job or with their current employer, and so refers to continuing spells of employment

### **Question C3.3**

Regulations on **dismissals/lay-offs** (collective of individual) are those that impose legal restrictions on dismissals and set compensation to be paid to former employees being laid-off.

Subsidized **short-time work** we mean measures that subsidize hours reductions encouraging employers to reduce working time rather than laying off workers.

**Early retirement** schemes is to be understood as measures allowing persons being made redundant to receive a monthly pension and / or lump sum payment before reaching the statutory retirement age.

#### **Question C4.1**

Total costs: all operating expenses (same definition as in question C2.4)

**Labour costs:** wages, salaries, bonuses, social contributions, training, tax contributions, contributions to pension funds. From the employers point of view these are often grouped as: direct remuneration (direct pay for time worked and bonuses); other direct cost (payments in kind, payment in capital and remuneration for non-working days); indirect cost (soc. sec. contributions, vocational training and miscellaneous taxes (same definition as in question C2.5)

#### **Question C4.9**

**Freeze in base wage**: base wage in nominal terms remains unchanged (from a revision to the next) **Cut in base wage**: base wage in nominal terms decreases (from a revision to the next)