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PRICE SETTING PRACTICES IN GREECE: EVIDENCE FROM A SMALL-SCALE FIRM-LEVEL SURVEY

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ABSTRACT

The paper documents the price setting practices followed by some 400 or so firms operating in Greece. Survey replies reveal: a low percentage of firms changing prices with frequency higher than annual; staggering of price changes during the year; sluggish adjustment of prices to cost shocks; asymmetries in price adjustment across positive and negative cost shocks and a speedier adjustment to increases in costs than to reductions in demand. The data confirm cross-sectional variations in price setting practices also found for other countries. On the basis of the results reached the conjecture that the prevalence of small firms, of firms providing services to businesses and of firms active in tourism-related activities might lie behind the inflation persistence exhibited until recently in Greece appears plausible.

Keywords: price setting; competition; survey data

JEL codes: E31, C41, J31, J41

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1. Introduction

The recession that started in Greece in 2008 and is still ongoing in 2013, has been characterised by large declines in output (-0.2% in 2008, -3.1% in 2009, -4.9% in 2010, -7.1% in 2011 and -6.4% in 2012). Yet, in both 2010 and 2011, inflation continued to exceed 3% and only fell significantly in 2012. In part, the positive rate of inflation reflects indirect tax increases (Bank of Greece, 2011 and 2012a). However, inflation is positive (1.4% in 2010, 1.1% in 2011, 1.0% in 2012) even after excluding this effect. The combination of a prolonged and deep recession with increasing prices has raised questions as to the contributing factors (European Commission, 2012; IMF, 2012; OECD, 2011).

Notwithstanding measurement issues,[1] exogenous factors preventing price decreases (e.g. rise in commodity prices, euro depreciation) and the high share of imported goods, it appears that product market rigidities, and more specifically informal barriers to entry, are preventing competitive forces from operating (Vettas, 2011).

Most of the discussion on the underlying causes of persistent inflation in Greece, even before the crisis, is held using macro evidence (see, *inter alia*, Stournaras and Albani, 2008 for a Balassa-Samuelson type argument; Mitrakos and Zonzilos, 2006; Pelagidis and Toay, 2006 for explanations based on product and labour market rigidities). Little is known, however, about actual price setting procedures by firms.

This paper documents price setting practices on the basis of the replies received in a small-scale firm-level survey. The survey is part of the research conducted within the Wage Dynamics Network (WDN); a team of European System of Central Banks (ESCB) economists investigating wage dynamics in Europe. The firm-level survey was conducted in the period December 2007 - March 2008, on the basis of a questionnaire designed by the WDN. Most questions were common for all countries undertaking the survey.[2]

The advantages of interviews as a research means are voiced by, *inter alia*, Blinder (1991) and Bewley (1999). Furthermore, the cross-country nature of the survey permits

[1] Bank of Greece, 2012b.
[2] Details on the core questionnaire and on the survey methodology followed in all countries can be found in Druant *et al.* (2012).

certain comparisons between practices followed in Greece and those followed in the EA. Inevitably, however, the extent to which the evidence presented can be generalized to the Greek economy depends mainly on whether the sample selected is unbiased and representative, and whether firms' replies accurately describe their behaviour. The sectors to which the surveyed firms belong cover around two-thirds of the non-primary business sector's value added or 77% of the sector's dependent employment.[3] The replies seem to be internally consistent. However, a repeat survey would be useful in assessing the validity of the answers and their independence from the particular macroeconomic conjuncture at the time of the survey. Furthermore, given the very low response rate (see Section 2) caution is necessary in generalising the results.

This paper documents price setting practices followed by firms in the sample with a focus on those aspects that might be associated with persistent inflation. To this effect, pricing strategies, product market structure and, wage setting practices are investigated. Low price demand elasticity and unanchored inflation expectations would further contribute to inflation persistence; unfortunately, the survey contains no direct information to test these two hypotheses.

Surveys in individual countries both in the EA and outside (for example, UK) suggest that small firms and providers of services to businesses follow more rigid price setting practices (Fabiani *et al*., 2007; Greenslade and Parker, 2008 and 2012), a result confirmed in this survey. Given the preponderance of such firms in the Greek economy this association could perhaps go towards explaining inflation persistence.

Greek firms are less likely than firms in the EA to react to shocks (cost or demand); reacting to cost shocks appears more likely reacting to demand shocks; behaviour between positive and negative cost shocks is asymmetric. The results suggest that price flexibility increases with competitive pressures and that the likelihood of second round effects (from wages to prices) increases with the share of labour costs. The existence of a firm-level wage agreement makes firms less responsive to decreases in demand confirming one of the Marshallian rules of derived demand, the complementarity of

[3] Non-market services, the primary sector, construction, financial services, utilities and real estate activities are excluded from the sampled population.

product market and worker bargaining power.

The rest of the paper is organised as follows: Section 2 presents information on survey design and content, sample characteristics and a snapshot of the macroeconomic conjuncture at the time of the survey. Section 3 reports the price setting practices followed by surveyed firms. Section 4 discusses the likelihood of price adjustment following a hypothetical shock. Section 5 looks into possible asymmetries in actual price setting behaviour. Finally, Section 6 summarises and concludes.

2. The survey

2.1. Sample design and survey response

The survey was conducted during the four months between December 2007 and March 2008 on the basis of a questionnaire (see Section B in the Appendix) developed by the representatives of central banks participating in the ESCB/Eurosystem Wage Dynamics Network (WDN). The questionnaire used in Greece was adapted by members of the Research Department of the Bank of Greece and of the Foundation for Economic and Industrial Research (IOBE) to fit the institutional settings of the Greek economy.

The survey was postal with an initial gross sample of some 6,700 firms. The sample was selected, by two-stage (sector and turnover) random stratification out of a population of around 25,000 limited liability companies or sociétés anonymes (SAs) from all sectors of economic activity excluding non-market services, the primary sector, construction, financial services, utilities and real estate activities. On the basis of 2007 national accounts data, the surveyed sectors produce around two-thirds of the non-primary business sector value added and employ around 77% of the sector's dependent employment. However, personal companies and partnerships with a small number of employees, a very popular form of organisation in Greece, are not part of the surveyed population.

A total of 444 firms replied to the questionnaire implying a response rate of just 6.6%. The response rate is indeed very low albeit not unusual for surveys in Greece. As the survey aims to capture objective strategies it is not clear why firms would have any

strategic reluctance to respond thus mitigating concerns about non-response bias.[4]

Manufacturing companies dominate the final sample (40.6%) (Panel A of Table 1). A comparison of Tables 1 and 12 reveals that manufacturing also dominates the sampled population but to a lesser extent (26.4%). Tourism-related activities, on the other hand, are underrepresented in the final sample (11.4% in the final sample vs 21.4% in the sampled population). The overrepresentation of manufacturing firms in the sample is due both to sample design and to the higher response rate of firms in the sector probably because the concepts of main product and main occupational group are better understood in manufacturing (Hall *et al*., 2000). In every sector the sample is biased towards larger companies. This is especially so in tourism-related activities and car sales (Table 13).

Comparisons between the final sample and the sampled population in terms of the sectoral distribution of *employment* show less divergence than the comparison in terms of the number of firms (Panel B of tables 1 and 12). For that reason, figures weighted by employment are used in the descriptive analysis. Descriptives should thus be interpreted as being representative of total employment in the sampled population. Regression analysis is unweighted.

2.2. Survey information on price setting strategies

The questionnaire contains a number of factual questions on wage settlements, bargaining levels and procedures, workforce features (e.g. number of employees, skill composition, contract-types, working arrangements, remuneration principles etc), price setting strategies, labour costs and an assessment of product market competition (domestic and international). The speed of adjustment to actual past demand and supply shocks is also recorded. In addition, a number of scenario-type questions are used to elicit information on firms' actions and the reasoning behind these. Questions are asked with

[4] It is possible that the response rate is higher than 6.6% since the number of eligible firms might be less than 6,700; certain firms in the gross sample are subsidiaries of firms already in the sample while others might have never received the questionnaire because of, for example, a change in their postal address. In any case, however, the response rate is on the low side, a development that might be due to: (a) firms in Greece already being legally liable to reply to several requests for statistics by the Hellenic Statistical Authority (ELSTAT), (b) the small average firm size, and (c) absence of a survey culture (de Heer and Israels, 1992; de Heer and Moritz, 2000). Other surveys, such as those conducted by IOBE or the Athens Laboratory of Business Administration (ALBA), also have low response rates, although not as low as in

reference to either the largest occupational group or the main product.

Table 2 presents the definitions of the variables of interest. Information was collected on price setting rules, the trigger for price changes (time-dependent, state-dependent pricing), the frequency at which prices are changed, the time of the year at which prices are changed and the degree of product market competition. Price setting is deemed as non-autonomous either if the price is regulated (administratively) or determined by the parent company, or if the customer sets the price (price taker). On the other hand, firms with an autonomous pricing policy are asked to choose between setting the price on their own but following competitors' prices or as a mark-up on costs.

A number of questions are used to elicit information on the competition firms face: (a) the share of turnover generated by exports, (b) self-assessed intensity of competition, (c) the likelihood of cutting prices following a competitor. A measure of market share, the ratio of sales in the 4-digit sector in which the firm belongs (constructed by the author using the ICAP firm-level financial information database for 2006), is also used to capture the degree of market power.

Firms were asked to report how they would react in the hypothetical case of an adverse demand shock and two cost shocks (raw material price increase, increase in labour costs). The survey records the likelihood of reacting in each of the following ways: (i) by changing prices, (ii) by altering profit margins, (iii) by adjusting output and (iv) by cutting operating costs.

Finally, firms were asked to report the speed at which they had typically reacted to actual increases (decreases) in the cost of production and in demand.

In the analysis we also use information on the level at which wage negotiations take place, the extent of time-dependent wage setting, the share of labour costs in total costs and the share of unskilled workers in the workforce.

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this survey. The difficulty and length of the questionnaire must have also contributed to the low response rate.

2.3 Macroeconomic conjuncture at the time of the survey

The end of 2007, when around 60% of the replies were received, and the first couple of months of 2008, when the rest of the replies were received, were periods of sluggish growth in Greece (GDP annual growth of 0.3% and 0.1% in the last quarter of 2007 and in the first quarter of 2008 respectively), high but declining unemployment and moderate inflation. The slowdown in growth followed a record number of 8 consecutive years of over 3.5% average annual growth. The economy, however, did not enter into recession until the third quarter of 2008. The unemployment rate stood at 8.1% in the last quarter of 2007 and was on a declining trend (down from 8.8% in the last quarter of 2006). In the last quarter of 2007 and the first quarter of 2008, the annual rate of consumer price inflation stood at 3.6% and 4.3%. Producer price inflation stood at 8.0% and 10.6% respectively. The period is thus unusual in terms of the large increases in producer prices --- reflecting hikes in energy prices --- although, the volatility of the producer price index had been increasing since 2003.[5] The significant increase in input prices implies that at the time of the survey firms had recent experience with an adverse cost shock. It is unlikely, however, that firms were anticipating declines in demand of the magnitude that have taken place since.

3. Price setting and adjustment practices: a description

The degree of inflation persistence depends on a number of price setting features: the rules followed, the trigger for a price change, the frequency of price changes as well as the synchronisation of these changes across firms. Below we summarise the survey evidence on each of these features.

3.1 Price setting rules

Firms were asked which rule they follow when pricing their main product. It appears (Table 3) that the majority (41.3%) of firms use competitors' prices as a benchmark. While this could be a sign of intense competition it could also signal collusive behaviour. The second most popular rule is setting prices as a mark-up on costs (35.6%). The price is regulated or set by customers only by 12.9% and 10.1% of firms

[5] The three-year moving average of the coefficient of variation of the producer price index of domestically manufactured goods increased from 0.7% in 2003 to 2.5% in 2007.

respectively. Table 3 illustrates the divergence between sectors in price setting rules. Following competitors' prices is most popular in retail trade and tourism-related activities. Manufacturing firms and providers of services to businesses, on the other hand, usually set prices as a mark-up on costs. Finally, and as expected, in car sales the price is regulated by the parent company. Differences in pricing rules by firm size are not as stark; the one fact that stands out from Panel B of Table 3 is a high percentage of regulated pricing and a relatively low percentage of mark-up pricing amongst very large firms.

Price setting rules in Greece appear to differ from those in the EA. In the EA, and on the basis of the WDN survey data, mark-up pricing is most widely used. The use of competitors' prices as a benchmark is the second most popular option. The discrepancy between Greece and the EA reflects mainly different practices in the services sector.

3.2 Time-dependent versus state-dependent pricing

Looking into the trigger for price adjustment, decisions are defined as time-dependent when the timing of the price change is exogenously given with the frequency of changes being either pre-determined (Taylor, 1980) or random (Calvo, 1983).[6] On the other hand, in state-dependent pricing firms choose when to change prices. In principle, state-dependent pricing is akin to firms reacting to external conditions and is thus associated with more price flexibility (Gertler and Leahy, 2008; Golosov and Lucas, 2007).

Pure state-dependent pricing appears more popular than pure time-dependent pricing (Table 4). Around 32.4% of firms in the sample pursue a pure state-dependent pricing strategy while 25.6% of firms follow a pure time-dependent strategy. The remaining 42% of firms in the sample pursue either a mixture of time-dependent and state-dependent pricing (24.4%) or report that neither strategy is relevant for them (17.5%).

Findings from the Inflation Persistence Framework (IPN) (Fabiani *et al.*, 2007) suggest that the percentage of firms following a pure state-dependent pricing strategy is

less popular in the EA than in Greece (20% in the EA vs 32% in Greece). Reversely the percentage of firms following a time-dependent strategy is higher in the EA than in Greece (34% in the EA vs 25.6% in Greece).[7]

As with price setting rules, reported in the previous section, we find considerable cross-industry variation in the price adjustment strategies (Table 4). In car sales and in tourism-related activities time-dependent pricing is the most popular strategy. Given the prevalence of tourism-related activities in Greece this would imply a considerable degree of inertia. On the other hand, state-dependent pricing is the most popular price adjustment method for manufacturing firms, wholesale traders and providers of services to businesses.

Variations across firms of different size are not as big; the one feature that stands out is that state-dependent pricing is more popular among larger firms.

Table 5 presents estimates from running a probit model of the probability of following a pure state-dependent pricing strategy on a set of sectoral and size dummies, indicators of the extent of product market competition and of price regulation.

The figures in Table 5 represent the probability impact of a unit change in each variable (from 0 to 1 in the instance of dummy variables) measured as average marginal effects.

The results confirm the lower likelihood of non-manufacturing firms in following a pure state-dependent pricing strategy. Cross-sectional differences in pricing behaviour might reflect differences in price adjustment costs due to, for example, the existence in some sectors of long-term contracts or relationships (what Okun, 1981 called `customer markets'). After conditioning on a firm's sector we find no evidence that size makes a difference in price adjustment strategy.

As expected, firms in which the price is regulated are less likely to follow state-dependent pricing.

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[6] See Klenow and Kryvtsov, 2008 for a succinct presentation of the features of the state-dependent and time-dependent pricing models.

[7] The figures for the EA refer to price reviews rather than price adjustments.

Turning to product market competition, firms reporting being very likely or likely to mimic a competitor in reducing prices have a 13% higher probability of following a pure state-dependent pricing compared to other firms.

Finally, there appears to be an association between state-dependent pricing and time-dependent *wage setting*. Firms setting wages in a particular month of the year (time-dependent wage setting) appear less likely to follow state-dependent pricing.

3.3 Frequency and synchronisation of price changes

Information on time-dependent or state-dependent pricing is not sufficient to determine the degree of price inertia. Further information is required on, *inter alia*, the frequency of price changes and on the synchronisation of these across firms. Time-dependent pricing combined with frequent price changes synchronised across firms could result in price flexibility while state-dependent pricing staggered over time could lead to price inertia (Taylor, 1999).

The survey information suggests that the mode frequency of price adjustment for firms in the sample is one year (Table 6). Despite the fact that strictly speaking only firms which change prices with pre-determined frequency (i.e. those that follow a time-dependent or a mixture of time-dependent and state-dependent strategies) were asked about the frequency of price changes, replies to this question were also received by other firms. The results of all firms are presented distinguishing, however, on their pricing strategy. Table 6 suggests that 71.9% of firms pursuing a time-dependent pricing strategy change prices annually with the remainder split between changing prices more frequently than annually (21%) and less frequently than annually or with no specific pattern (7.6%). Around 34% of firms pursuing a mixture of time-dependent and state-dependent pricing strategies change prices with annual frequency. Amongst firms reporting frequency of price changes despite following a pure state-dependent strategy (69 out of the 172 firms that follow state-dependent pricing) most (55.8%) do not have any specific pattern with which they change prices (consistent with their answer to the price strategy question) while 29% change prices with annual frequency, 6.5% change prices more frequently than annually and 8.7% change prices less frequently than annually.

The percentage of firms in Greece changing prices annually does not appear to

differ substantially from those in other euro area (EA) countries, Sweden or the USA (Table 7).[8] However, the percentage of firms changing prices more frequently than annually is (statistically) significantly lower in Greece than in the EA.

Table 8 displays the estimated average marginal effects from an ordered probit for the highest price frequency change category (change prices more frequently than annually). The results suggest that firms providing services to businesses' are less likely than manufacturing firms to change prices more frequently than annually while the reverse is true for car dealers. Firm size (larger firms change prices more often) and product market structure (firms with higher market share change prices less frequently) also matter. There is also some indication that firms with a lower share of labour costs than the corresponding industry average are more likely to change prices more frequently than annually. The intuition behind this last result is that a low share of labour costs implies higher use of intermediate inputs (raw materials) the prices of which exhibit high variation.

Finally, we present information on the extent to which price changes are synchronised across firms. Firms are asked whether price changes take place in a particular month. The majority (56%) report that there is no regular month in which prices are changed (Figure 1). This percentage is higher than that in the EA (39%) confirming the lower use of time-dependent price setting in Greece. Out of firms replying that price changes take place in a specific month there is some bunching of price changes: around 60% of these firms change prices in either January (44%) or March (17%).[9]

4. Price changes in face of hypothetical cost and demand shocks.

The information presented above is useful but not direct evidence of what firms do when faced with a shock. The questionnaire, as already mentioned in Section 2, includes a number of *scenario-type* questions on this matter that are analysed next.[10]

[8] Comparisons are complicated by the fact that not all surveys included the `No specific pattern' option. A plausible hypothesis would be that those reporting following no specific pattern, change prices less frequently than annually.
[9] Percentages shown in the chart sum to 100 since the "No Pattern" category is included.
[10] The relevant questions are 28, 30 and 32.

The questions can be succinctly summarised as follows:

As a reaction to each of the following three shocks (slowdown in demand, increase in the price of an intermediate input and an unexpected increase in labour costs) how likely (very likely, likely or unlikely) are you to:

- Adjust the price of your product
- Reduce profit margins
- Reduce output
- Curtail operating costs

Since the modes of reaction are not mutually exclusive, the likelihood of reacting by all modes was asked.

As emphasised by Small and Yates (1999), who analyse data from a survey with a similar question, replies should be interpreted as revealing something about the short-run rigidity of prices in face of a permanent shock or about the rigidity of prices in response to a transitory shock since it is not reasonable for profit maximising firms to not respond to changes in demand if these are deemed to be permanent.

Figure 2 depicts the percentage of firms likely or very likely to react in each way. The figure suggests that firms react most after a slowdown in demand and less after an increase in wages. As for the methods of reaction, the reduction of output (solid black bar) is by far the least likely reaction method with a change in prices being the next less likely method. In general, profit margin adjustment (striped bar) appears to be the most popular reaction.

Comparing reactions to shocks in Greece with those in the EA (Figure 3) we do not find the clear stronger reaction (through all means) to a slowdown in demand that we found for Greece. Similar to Greece, however, the curtailment of operating costs is quite a popular mode of reaction while output adjustment is rarely used. In the EA adjustment through prices is almost as popular as the reaction through margins while in Greece margins' adjustment dominates.

The above conclusions are not consistent with the positive inflation differential observed until 2011 between Greece and the EA since survey results suggest that firms in Greece are more proactive in face of adverse demand shocks.

In what follows, the focus is on the firm and product market features that impact on the likelihood of a price adjustment following each of the three shocks. Table 9 presents the results from estimating the likelihood of price adjustment after each shock. The dependent variable takes the value 1 if a price adjustment is likely or very likely and the value 0 otherwise. The marginal effects in Table 9 measure the probability impact of a unit change in each variable (from 0 to 1 in the instance of dummy variables) measured as average marginal effects (AME).

4.1 Price changes in face of cost shocks: likelihood of adjustment

4.1.1 Intermediate input price increase

As expected due to differences in the technology of production, the likelihood of price adjustment after the increase in the price of an intermediate input varies considerably by sector. Such an adjustment is less likely for providers of services to businesses and for firms in tourism-related activities. A possible reason is that in these sectors raw materials (e.g. oil) are used less.[11] As expected, the likelihood of a reaction or otherwise depends on the pricing strategy followed by firms; firms following state-dependent pricing are more likely (11 percentage points) to adjust their price in face of a shock in input prices.

A dummy to indicate whether the share of revenue from exports exceeds 50% (Exporting company)[12] is not found to be statistically significant. Firms unlikely to follow their competitor in a price decrease are found to be more likely to increase the price of their product after an input price increase.

No association between the likelihood of changing the price and the type of collective agreement or the share of labour costs in total costs is found. The likelihood of

[11] Blanchard and Galí, J., 2008 reach a similar conclusion by claiming that one of the reasons for the different impact of oil price shocks in the 2000s compared to the 1970s is the decrease of the share of oil in production.
[12] 67 firms satisfy this condition.

changing prices following a shock is also linked to the probability of using other methods of adjustment. In fact, different adjustment methods appear as complements rather than substitutes.

4.1.2 Wage increase

Manufacturing firms are more likely than firms in other sectors to change prices in face of a wage increase. The higher the share of labour costs is total costs the more likely are firms to change their product price as a result of a wage increase. Firms following only the national-level wage agreement are less likely to pass on wage increases to prices. We find that the likelihood of passing on wage increases is positively associated with the share of low-skilled blue collar workers and as expected negatively associated with the extent to which pay is linked to firm performance.

4.2 Price changes in face of a negative demand shock: likelihood of adjustment

Manufacturing, retail trade and providers of services to businesses are most likely to change prices when confronted with a negative demand shock. A price adjustment is more likely for firms receiving 50% or over of their sales revenue from exports. Firms less likely to follow their competitors in lowering prices are also less likely to change prices when hit by a negative demand shock. Finally, firms with a firm-level collective wage agreement are less likely to react to a demand shock by reducing prices. The intuition behind the latter result is that worker bargaining power and product market competition are complements.

5. Asymmetries in price adjustment.

The above results provide some indications as to characteristics that make firms more likely to adjust prices as a reaction to supply and demand shocks. They do not, however, describe the actual behaviour of firms. Furthermore, they do not provide hints as to the time it takes for such changes or about asymmetries, in the speed and the size of the adjustment, between negative and positive shocks. Asymmetries may arise due to adjustment costs (Peltzman, 2000) or due to increased input price volatility (Borenstein *et*

al., 1997), although evidence of their existence is not conclusive (Blinder, 1994 finds no evidence of asymmetry).

Companies were asked about the actual length of time an adjustment in prices took after each of 4 shocks: a positive and a negative supply shock and a positive and a negative demand shock. Replies were recorded either in number of months - if the interval was less or equal to a year - or just as an indication of whether the adjustment took less or more than a year. Most firms only distinguished between more and less than a year.

An inspection of the replies reveals the following (Tables 10 and 11): First, the number of firms replying that a change in price is not applicable when production costs decrease is over one and a half times higher the number of firms giving the same reply in case of a cost increase. The difference is statistically significant. Possible explanations include the dearth of instances in which the overall cost of production decreased and unanchored inflation expectations. Second, the percentage of providers of services to businesses' and of firms in tourism-related activities reacting to a cost decrease within a year is low (Table 11). Third, the percentage of firms reacting within a year to a cost increase exceeds the corresponding percentage following a cost decrease with the difference being again statistically significant. This is observed in all sectors (see Table 11). Fourth, a change in prices is more likely following a cost increase rather than a demand decrease. This result is not consistent with that reached when looking at the hypothetical scenaria although it appears more consistent with the inflation inertia observed until recently in the Greek economy.

6. Summary and conclusions

Persistent inflation has been a pressing issue for Greece. The degree of persistence has been manifested most vividly when, despite a very deep recession, inflation until 2011 continued to exceed that of the euro area average.

Existing literature has focused on product and labour market rigidities in trying to explain inflation persistence. Little is known, however, about the actual price setting

behaviour by companies. The paper aims to contribute in this direction by documenting the price setting practices followed by some 400 or so firms operating in Greece. Survey replies reveal a low percentage of firms changing prices with frequency higher than annual, staggering of price changes during the year, sluggish adjustment of prices to supply shocks, asymmetries in price adjustment across positive and negative cost shocks and a speedier adjustment to increases in costs than to reductions in demand. On the basis of the associations established in the paper we could reach the conjecture that the prevalence of small firms, the high share of providers of services to businesses and of firms active in tourism-related activities in total output might lie behind the inflation inertia exhibited until recently in Greece.

The next step in this research would be to repeat the survey in order to find what firms did when faced with the actual demand shock of the last few years. The role of expectations in this context should also be investigated. This exercise apart from being interesting, for finding out more on price setting practices, will also help evaluate the informational value added of scenario type questions.

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Figures and Tables

Figure 1: Distribution of firms changing prices in each month (%)

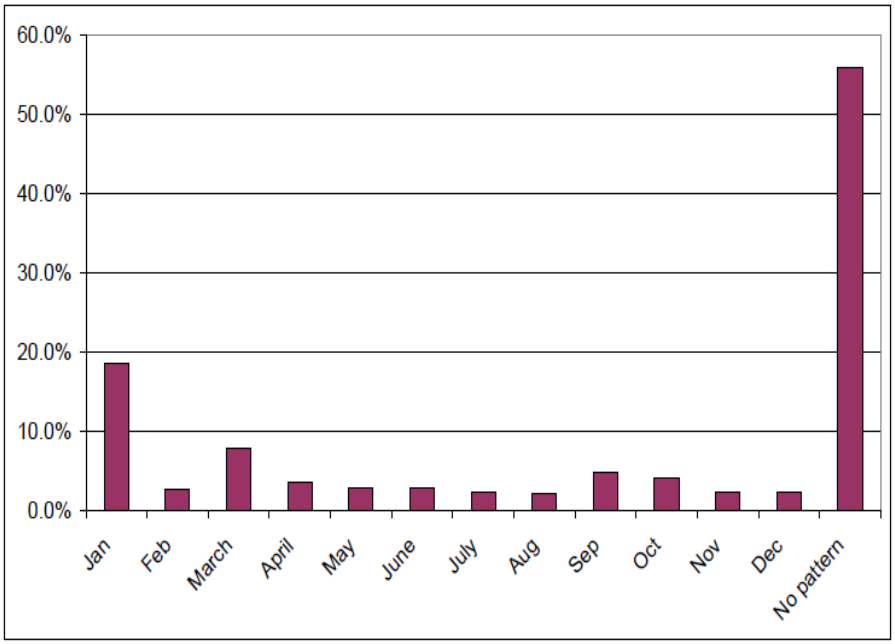

Figure 2: Percentage (%) of firms in Greece for which each adjustment strategy is likely or very likely by type of shock

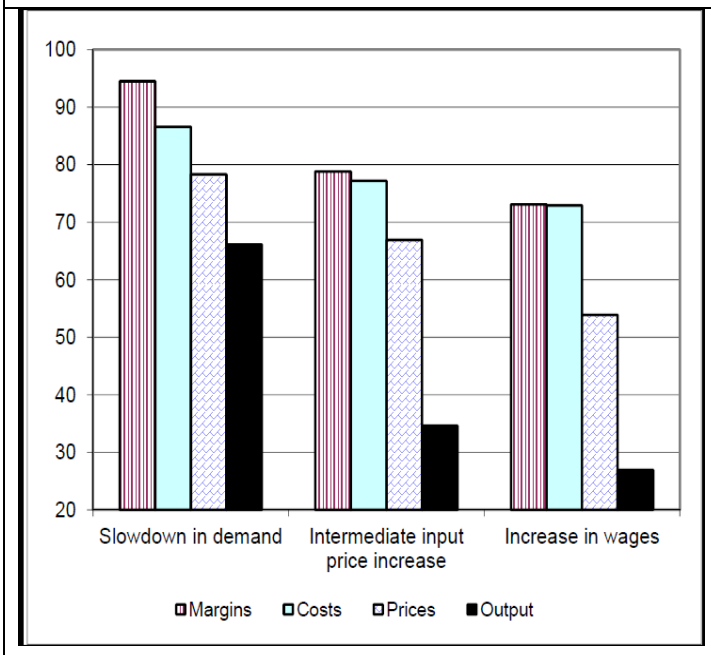

Figure 3: Percentage (%) of firms in the Euro Area for which each adjustment strategy is likely or very likely by type of shock

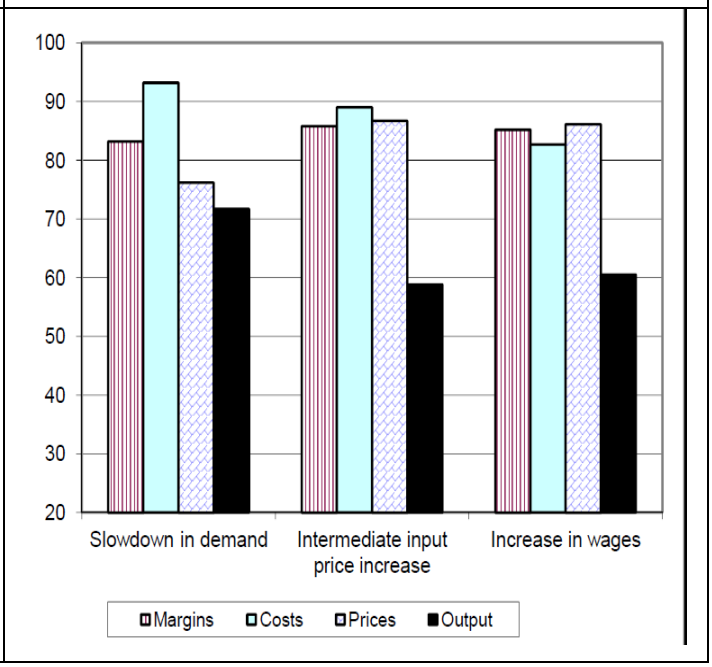

Table 1: Sample composition by sector and size

Panel A	Size class - % of firms							
Sector[a]	1-4	5-9	10-19	20-49	50-99	100-199	200+	Total
Manufacturing	0.70	2.56	6.76	13.52	5.36	5.36	6.29	40.6
Car sales	0.23	0.47	0.47	0.93	1.17	0.70	0.23	4.2
Wholesale trade	0.93	1.40	2.10	6.06	3.73	1.17	0.70	16.1
Retail trade	0.00	1.17	2.10	0.23	0.93	0.47	0.93	5.8
Tourism-related activities	1.63	2.33	2.10	3.26	0.47	0.23	1.40	11.4
Services to businesses	2.80	4.20	3.50	5.13	2.10	1.86	2.33	21.9
Total	6.29	12.12	17.02	29.14	13.75	9.79	11.89	100.0
Panel B	Size class - % of employees							
Sector[a]	1-4	5-9	10-19	20-49	50-99	100-199	200+	Total
Manufacturing	0.0	0.1	0.6	3.2	2.6	5.0	24.6	36.2
Car sales	0.0	0.0	0.0	0.2	0.6	0.5	0.3	1.7
Wholesale trade	0.0	0.1	0.2	1.4	1.7	1.2	1.3	5.8
Retail trade	0.0	0.0	0.2	0.1	0.4	0.4	21.2	22.3
Tourism-related activities	0.0	0.1	0.2	0.7	0.2	0.2	15.4	16.7
Services to businesses	0.1	0.2	0.3	1.2	0.9	1.6	13.1	17.3
Total	0.1	0.6	1.6	6.7	6.3	8.9	75.8	100.0

Source: Survey data.

a The correspondence with the NACE rev.1 classification is: Manufacturing: 15-37, Car sales: 50, Wholesale trade: 51, Retail trade: 52, Tourism-related activities: 55,60, 63; Services to businesses: 60,64,71,72,74 and 93.

Table 2: Main survey variables of interest: definitions and means

Survey question	Options	% of firms
Price determination		
Price setting – Q36	Follow competitors' prices (Autonomous)	41.3
	Mark-up pricing (Autonomous)	35.6
	Regulated (Non-autonomous)	12.9
	Customer sets the price (Non-autonomous)	10.1
Price change trigger –Q40	State-dependent	32.4
	Time-dependent	25.6
	Mixed	24.4
	Not relevant	17.5
Frequency of price changes – Q41	Annual	43.7
	Less frequent than annual or with no specific pattern	39.6
	More frequent than annual	16.7
Competition measures		
Competition intensity (self-perceived) – Q37	Very intense	41.5
	Intense	51.6
	Subdued	4.3
	No competition	2.6
Follow competitors in a price cut – Q38	Very likely	22.0
	Likely	46.9
	Unlikely	11.4
	Not applicable	19.7
% of revenue generated from exports – Q35	>50%	20.0
	≤50%	80.0
Market share in the 4-digit industry the firm belongs (% sales)		5.2
Wage setting variables		
Regular month for wage changes – Q19	Yes	63.3
	No	36.7
Bargaining level – Q9 & Q11	Firm	21.7
	Sectoral	56.2
	Occupational	8.9
	Other (National only)	13.2
Labour costs as a % of total costs		38.4

Source: Survey data (employment weighted).

Table 3: Price setting rules - % of firms

Panel A	**Pricing rules by sector**			
Sector	Price is set by competitors	Mark-up pricing	Price is regulated	Customer sets price
Manufacturing	28.1	59.4	2.1	10.4
Car sales	24.2	19.9	55.3	0.7
Wholesale trade	23.7	39.1	32.6	4.7
Retail trade	68.6	11.7	11.2	8.5
Tourism-related activities	49.9	26.4	7.8	15.7
Services to businesses	33.4	43.8	10.3	12.5
Total	41.3	35.6	12.9	10.1
Panel B	**Pricing rules by firm size**			
Firm size	Price is set by competitors	Mark-up pricing	Price is regulated	Customer sets price
1-9	40.9	36.5	12.1	10.5
10-49	42.8	35.6	12.0	9.6
50-199	36.6	45.1	9.5	8.8
200+	40.1	21.9	25.9	12.1
Total	41.3	35.6	12.9	10.1

Source: Survey data (employment weighted), Q36.

Table 4: Pricing strategy

Panel A	**Pricing strategy by sector - % of firms**				
Sector	State-dependent	Mixed	Time-dependent	Not relevant	Total
Manufacturing	45.9	33.2	12.7	8.3	100.0
Car sales	23.7	3.3	52.5	20.6	100.0
Wholesale trade	37.6	17.2	23.5	21.9	100.0
Retail trade	15.8	43.5	28.6	12.1	100.0
Tourism-related activities	26.2	15.6	37.5	12.1	100.0
Services to businesses	35.5	12.4	20.8	31.3	100.0
Total	32.4	24.4	25.6	17.5	100.0
Panel B	**Pricing strategy by firm size**				
Firm size	State-dependent	Mixed	Time-dependent	Not relevant	Total
1-9	27.3	18.1	27.5	27.1	100.0
10-49	32.2	31.7	28.6	7.5	100.0
50-199	47.2	27.3	8.8	16.7	100.0
200+	44.4	11.0	16.3	28.3	100.0
Total	32.4	24.4	25.6	17.5	100.0

Source: Survey data (employment weighted), Q40.

Table 5: Explaining state-dependency
(average marginal effects from probit estimates)

Variable[a]	Average marginal effect	Std.error
Sector of economic activity		
Manufacturing (Reference group)		
Car sales	-0.121**	0.0598
Wholesale trade	-0.111***	0.0352
Retail trade	-0.175***	0.0179
Tourism-related activities	-0.250***	0.0203
Services to businesses	-0.151***	0.0198
Firm size (number of employees)		
1-9	-0.0304	0.0792
10-49 (Reference group)		
50-199	0.00572	0.0475
200+	0.0337	0.0723
Price and wage setting		
Regulated price	-0.202*	0.116
Wages changed in particular months	-0.110***	0.0303
Product market competition		
Follow competitor	0.126***	0.0459
Observations		400
Log-likelihood		-253.787
McFadden's pseudo-R^2		0.0674
Observed probability		0.42
Estimated probability		0.41

Cluster (sector)-correlated s.e. are presented *** p<0.01, ** p<0.05, * p<0.1

a The dependent variable takes the value 1 if the firm follows a pure state-dependent pricing and 0 otherwise.

Table 6: Frequency of price changes: % of firms changing prices at each frequency

Frequency	**Pricing strategy**[a]				
	Time-dependent (90)	Mixed (79)	State-dependent (69)	Not relevant (32)	Total (270)[b]
More frequently than monthly	0.8	6.4	3.5	0.3	3.0
More frequently than quarterly	0.0	0.9	0.0	0.0	0.3
More frequently than bi-annually	4.9	1.0	1.2	0.0	2.2
More frequently than annually	14.8	19.8	1.8	0.0	11.2
Annually	71.9	34.0	29.0	21.4	43.7
Less frequently than annually	3.8	15.4	8.7	0.5	7.7
No specific pattern	3.8	22.5	55.8	77.8	31.9
Total	100.0	100.0	100.0	100.0	100.0

Source: Survey data (employment weighted), Q40 and Q41.
a A test of the hypothesis of equal means is rejected with state-dependent pricing firms found to change prices more frequently than time-dependent pricing firms.
b Number of firms in brackets.

Table 7: Cross-country evidence on the % of firms changing prices at various frequencies

	Frequency				
Country[a]	More frequently than annually	Annually	Less frequently than annually	No specific pattern	Total
Canada[b]	65.0	27.0	8.0	-	100.0
Euro area (2004)[c]	34.0	39.0	27.0	-	100.0
Euro area (2008)[d]	21.9	40.8	5.1	32.1	100.0
Greece	16.7	43.7	7.7	31.9	100.0
Sweden[e]	32.6	40.3	27.1	-	100.0
UK[f]	37.0	34.0	-	29.0	100.0
USA[g]	48.4	39.2	10.2	-	100.0

a Note that the evidence is not strictly speaking comparable across countries for at least two reasons: first, it does not refer to the same point in time although there is some evidence, at least for the UK, of little change in the decade prior to the current crisis (see, for example, Greenslade and Parker, 2008) and second, because results in some countries are not weighted.
b Amirault *et al*., 2006
c Fabiani *et al*., 2007 - Table 2.6.- weighted average of information on the following 9 EA countries: Austria, Belgium, France, Germany, Italy, Luxembourg, Netherlands, Portugal and Spain.
d Druant *et al*., 2012 – average of the EA-17 except Cyprus, Germany, Luxembourg, Malta and Slovakia.
e Apel *et al*., 2005
f Greenslade and Parker, 2008
g Blinder *et al*., 1998
Sources: As indicated above for all countries, for Greece Survey data.

Table 8: Explaining frequency of price changes (average marginal effects from ordered probit) (Outcome=3 i.e. prices change at more frequent intervals than annually)

Variable[a]	Average marginal effect	Std.error
Sector of economic activity		
Manufacturing (Reference group)		
Car sales	0.361***	0.0130
Wholesale trade	0.182***	0.0163
Retail trade	0.256***	0.0071
Tourism-related activities	0.0684***	0.0132
Services to businesses	-0.222***	0.00779
Firm size (number of employees)		
1-9	-0.0796**	0.0472
10-49 (Reference group)		
50-199	0.122***	0.0206
200+	0.115***	0.0369
Labour cost share > than sector average	-0.117*	0.0570
Product market competition		
Market share	-0.00155***	0.000393
Observations		167
Log-likelihood		-134.11
McFadden's pseudo-R^2		0.1342

Cluster (sector)-correlated s.e. are presented *** p<0.01, ** p<0.05, * p<0.1

a The dependent variable takes the value 1 if prices are changed rarely, 2 if prices are changed annually and 3 if prices are changed more frequently.

Table 9: Likelihood of price adjustment following each shock – average marginal effects (AME) from probit estimates

	Intermediate input		Wages		Demand	
	AME	SE	AME	SE	AME	SE
Sector of economic activity						
Manufacturing (Reference group)						
Car sales	-0.0506	0.0356	-0.385***	0.0962	-0.0948***	0.0216
Wholesale trade	-0.0442	0.0307	-0.249***	0.0426	-0.0499***	0.0146
Retail trade	-0.0142**	0.0467	-0.510***	0.0959	-0.0213	0.0151
Tourism-related	-0.125*	0.0745	-0.211*	0.115	-0.0110	0.0171
Services to businesses	-0.301***	0.0328	-0.177**	0.0766	0.0154	0.0194
Pricing strategy						
State-dep. pricing	0.115**	0.0433	0.0565	0.135	0.0666*	0.0361
Product market structure						
Exporting company	-0.155	0.147	-0.0130	0.118	0.142***	0.0344
Likelihood of following competitors in reducing prices						
(i) Very likely	0.0564	0.0366	0.0545	0.145	0.0413	0.0390
(ii) Likely to follow competitor (Reference group)						
(iii) Unlikely	0.117**	0.0468	0.0259	0.125	-0.115***	0.0406
(iv) Not applicable	-0.0985**	0.0515	0.0223	0.0978	-0.234***	0.0644
Wage setting						
Type of wage agreement						
(i) Firm-level	0.0318	0.0298	0.0195	0.0512	-0.112**	0.0495
(ii) Sectoral-level (Reference group)						
(iii) Occupational-level	0.0460	0.0750	0.121	0.225	-0.0296	0.0855
(iv) Other type (national)	-0.0469	0.121	-0.400*	0.220	-0.0519	0.0577
Labour cost & workforce composition						
Labour cost share (%)	0.00107	0.00113	0.00214*	0.00121	-0.00141	0.00172
% of wage bill linked to pay related performance						
1-5% (Reference group)						
6-10%			-0.112	0.0889		
11-15%			-0.0858	0.212		
16-20%			-0.114	0.173		
21-30%			-0.112*	0.0579		
Proportion of low-skilled blue collar			0.00107	0.000594		
Other methods of adjustment						
Margins' adjustment	0.154*	0.0804	0.179	0.156	0.119**	0.0554
Output adjustment	0.0477	0.0326	0.0250	0.0873	-0.0443	0.0504
Cost adjustment	0.178*	0.1001	-0.0201	0.0974	0.0482	0.0545
Observations	286		149		303	
Pseudo R^2	0.24		0.12		0.18	
Log-likelihood	-134.3		-88.5		-120.9	

Cluster (sector) correlated standard errors. ***p<0.01, **p<0.05, *p<0.1

Table 10: Elapsed time before changing prices by type of shock (% and number of firms)

	Elapsed time[a]			
Type of shock	One year or less	More than a year	Not applicable	Total
Cost increase	64.9 (254)	18.7 (73)	16.4 (65)	100 (392)
Cost decrease	51.2 (201)	15.4 (60)	33.4 (131)	100 (392)
Demand increase	55.0 (215)	16.9 (66)	28.1 (109)	100 (390)
Demand decrease	56.0 (218)	16.7 (65)	27.3 (107)	100 (390)

Source: Survey data (employment weighted), Q39.

a Data restricted to firms that replied to both parts of each pair (cost, demand) of questions.

Table 11: Percentage of firms changing prices within a year by sector

Sector[a]	Cost increase	Cost decrease	Demand increase	Demand decrease
Manufacturing	79.1	60.8	61.7	67.7
Car sales	77.4	76.7	74.2	75.7
Wholesale trade	73.9	60.2	58.9	70.5
Retail trade	72.7	57.3	59.1	26.7
Tourism-related activities	56.5	40.2	44.9	55.1
Services to businesses	31.7	15.0	42.9	46.3
All sectors	64.9	51.2	55.0	55.9

Source: Survey data (employment weighted), Q39.

a See footnote a to Table 10.

Appendix

A Detailed sample information

Table 12: Population composition by sector

Sector	Number of firms	% total	Dep. Employees (in '000s)	% in total
Manufacturing	6,032	26.4	408.0	27.5
Car sales	1,024	4.5	69.0	4.6
Wholesale trade	5,853	25.6	104.0	7.0
Retail trade	1,656	7.3	247.0	16.6
Tourism-related activities	4,898	21.4	239.0	16.1
Services to businesses	3,393	14.8	418.0	28.1
All sectors	22,856	100.0	1,485.0	100.0

Sources: ICAP data; ELSTAT-LFS Survey, 2007 Q2

Table 13: Sales revenue of median firm in the sample and in the population

	Sales revenue of median firm (in EUR '000s)	
Sector	Final sample	Sampled population
Manufacturing	5,195.4	1,658.4
Car sales	22,434.9	1,819.2
Wholesale trade	14,742.1	1,774.0
Retail trade	2,671.8	1,178.5
Tourism-related activities	1,498.8	303.7
Services to businesses	2,002.7	397.6

Sources: Sample and ICAP Data.

B Questionnaire

A SIGN [D] AT THE END OF THE QUESTION INDICATES THAT CLARIFICATIONS/DEFINITIONS CAN BE FOUND AT THE END OF THE QUESTIONNAIRE

Company information (Questions 1-7)

1 Company workforce size at the end of 2006? [D]

Total number of employees	
Out of which:	
Full-time employees on indefinite length contracts	
Part-time employees on indefinite length contracts	
Employees on fixed length contracts	
Other employees (trainees, students etc).	
Other types of workers (e.g. people employed through temporary work agencies, freelance, consultants etc).	

2 How many employees left the company, for no matter what reason, during 2006?

_____

3 How many employees joined the company during 2006?

_____

4 How was your company's workforce distributed across the following occupational groups at the end of 2006? [D]

Blue-collar workers	
Skilled	_____ %
Unskilled	_____ %
White-collar workers	
High skilled and management	_____ %
Other	_____ %
	100%

5 How were your company's employees on indefinite length contracts distributed according to tenure at the end of 2006?

Less than 1 year	_____ %
Between 1 and 5 years	_____ %
More than 5 years but less than 15 years	_____ %
Over 15 years	_____ %
TOTAL	100 %

6 What percentage of your company's total costs were due to labour costs in 2006 ? [D]

_____ %

7 What is the principle of remuneration for the main occupational group in your company (as this was identified in your reply to question 4 above)?	
Hourly rate	□
Daily rate	□
Monthly salary	□
Piece-rate	□
Other (please specify)	_____

Wage setting and wage changes (Questions 8-22)

This section focuses on information on wage setting practices and on the frequency and timing of wage changes. Unless otherwise indicated, answers should refer to "normal conditions and practices".

8 Is any sectoral pay agreement in force in your company? Are any workers covered by occupational pay agreements?		
	Yes	No
Sectoral	□	□
Occupational	□	□

9 What percentage of your workforce is covered by occupational pay agreements?
___ %

10 Do you participate (or are you represented) in the negotiations for the sectoral-level agreement or for any of the occupational agreements which are in force in your company?	
Yes	□
No	□

11 Notwithstanding your answer to question 8, does your company apply a company-level pay agreement?	
Yes	□
No	□

12 What percentage of your company's full-time employees are paid at the minimum level provided for by the sectoral or occupational pay agreements? [D]
_____ %

13 By what percent does the average wage paid to the most numerous occupational group in your company (as this was identified in your reply to question 4) differ from that provided in the sectoral or occupational level agreements? [D]
_____ %

14 Is any part of your wage bill linked to company or individual worker performance? [D]	
Yes	□
No	□

If yes, approximately what percentage of your total wage bill in 2006 was accounted for by individual or company performance related bonuses or benefits? [D]				
0-5%	6-10%	11-15%	16-20%	21-30%

15 Does the pay agreement in force in your company provide for the adjustment of wages to inflation? [D]	
No	□ → **GO TO QUESTION 18**
Yes	□
16 If you replied in the affirmative to the previous question please indicate whether this adjustment is automatic and whether it is linked to expected or actual past inflation?	
Wage changes are <u>automatically linked</u> to:	
- past inflation	□
- expected inflation	□
Although there is no formal rule, wage changes <u>take into account</u>:	
- past inflation	□
- expected inflation	□
17 If the adjustment is linked to expected inflation are wages further adjusted in the following year if actual (realised) inflation turns out higher than had been expected?	
Yes	□
No	□

18 How frequently is the base wage of an employee belonging to the main occupational group in your company (as this was identified in your reply to question 4) typically changed in your company? [D]

<u>Please tick an option for each of the three types of wage changes listed below</u>.

	More than once a year	**Once a year**	**Once every two years**
Wage changes due to inflation	□	□	□
Wage changes due to tenure	□	□	□
Wage changes apart from tenure and/or inflation	□	□	□

19 Under normal circumstances are base wage changes (except for those specified in the National General Collective Labour Agreement) concentrated in any particular month/ months?

No □

Yes: Jan. □ Feb. □ Mar. □ Apr. □ May □ June □ July □ Aug. □ Sept. □ Oct. □ Nov. □ Dec. □

20 Apart from the collective pay agreement applicable to your company which of the following factors is the most relevant in determining the entry wage of newly hired employees? <u>Please choose a single option</u>

	Unskilled workers	**Skilled workers**
Wage of similarly qualified employees in the company	□	□
Wage of similarly qualified employees outside the company	□	□
Availability of workers with similar characteristics in the labour market	□	□
Other factors (please specify) _____	□	□

21 Do you pay newly hired employees significantly lower wages than wages paid to workers of similar experience and qualitfications already employed in your company?	
Yes	□
No, because (**please choose a single option, the most important reason**):	
a) It would be perceived as unfair and earn the company a bad reputation	□
b) it would have a negative effect on the productivity of new employees	□
c) It is impeded by labour regulation or collective pay agreement	□
d) Unions would contest such action	□
e) Other reasons (please specify)_____	□
22 If you were facing difficulties in filling vacancies in your company would you pay newly hired employees significantly higher wages than wages paid to similarly qualified employees already in the company?	
Yes	□
No, because (**please choose a single - the most important - reason**):	
a) It would be perceived as unfair by existing employees	□
b) It would have a negative effect on employee productivity	□
c) It is impeded by labour regulation or collective pay agreement	□
d) It would generate pressure for wage increases by existing employees	□
e) Not permitted by the collective agreement	□
f) Other reasons (please specify)_____	□

Adjustment of wages to shocks (Questions 23-34)

This section addresses the issue of the presence of (potential) obstacles to downward wage adjustments and the way of reaction of companies to different shocks.

23 Over the last five years, has the base wage of any employees in your company been frozen?	
- No	□
- Yes (indicate for what percentage of your employees)	_____%
24 Over the last five years, have benefits (pecuniary or in kind) been cut?	
- No	□
- Yes (indicate for what percentage of your employees)	_____%
25 If "yes" to either questions 23 or 24, what was the main reason for this development? Please choose only one -the most important- reason.	
Low profitability and/or sales	□
Productivity lower than expected	□
Jobs were at risk	□
Imposed by legislation or a higher level collective agreement	□
Increase in other costs besides wages and salaries	□
Other reasons (please specify)_____	□

26 Which of the factors listed below, and to what extent, prevent you from keeping wages stable even though your company might be in a position to have to contain labour costs? Please evaluate all factors

	Not relevant	Little relevance	Very relevant
Collective agreements prevent wages from being cut	□	□	□
There is an implicit understanding between workers and employers about more or less stable wage changes	□	□	□
It would damage the company's reputation as an employer	□	□	□
It would make attracting new employees more difficult	□	□	□
It would have a negative impact on employee morale	□	□	□
Employees compare their wage to that of similarly qualified workers in other companies in the same market	□	□	□
It would have a negative impact on employees' productivity	□	□	□

27 Has any of the following strategies ever been used in your company to contain labour costs?

Please choose as many options as apply to your company.

Reduction in the number of employees	□
Reduction in the number of overtime hours worked	□
Reduction or elimination of bonus payments	□
Reduction or elimination of benefits in kind	□
Restructuring (e.g. eliminate task delineation, redistribute assignments etc.)	□

THE NEXT QUESTIONS IN THIS SECTION AIM TO DOCUMENT HOW YOUR COMPANY REACTS TO SHOCKS

28 How relevant are each of the following strategies when your company faces an unanticipated, and expected to be lasting, slowdown in demand for your main product? [D] Please tick an option for *each* line.

	Not likely	Likely	Very likely
Change in prices	□	□	□
Lower profit margins	□	□	□
Cut down output/activity	□	□	□
Contain operation costs	□	□	□

29 If in your answer to the previous question you replied that the reduction of costs is "likely" or "very likely", indicate the main channel through which this goal is achieved:

Please choose a single option, the most important factor.

	Unskilled employees	Skilled employees
Constant or limited increase of base wages	□	□
Containment of flexible remuneration components (e.g. bonuses, benefits, etc.)	□	□
Reduction of the number of employees with permanent contracts	□	□
Reduction of the number of employees with temporary contracts	□	□
Adjustment of working time (e.g. reduction of overtime hours, annualisation of working hours etc.)	□	□
Containment of other (non-labour) costs	□	□

30 How relevant are each of the following strategies when your company faces an unanticipated increase in the cost of an intermediate input (e.g. an oil price increase) affecting all companies in the market?

Please tick an option for each line.

	Not likely	Likely	Very likely
Increase prices	□	□	□
Lower profit margins	□	□	□
Cut down output/activity	□	□	□
Contain other operating costs	□	□	□

31 If in your answer to the previous question you replied that the reduction of other costs is "likely" or "very likely", indicate the main channel through which this goal is achieved:

Please choose one -the most important- factor.

	Unskilled employees	Skilled employees
Constant base wages / limited increases in base wages	□	□
Containment of flexible remuneration components (e.g. bonuses, benefits, etc.)	□	□
Reduction of the number of employees with permanent contracts	□	□
Reduction of the number of employees with temporary contracts	□	□
Adjustment of working time (e.g. reduction of overtime hours, annualisation of working hours etc.)	□	□
Containment of other (non-labour) costs	□	□

32 How relevant are each of the following strategies when your company is faced with an unanticipated permanent increase in wages (e.g. due to the National General Collective Labour Agreement) affecting all companies in the market?

Please tick an option for each line.

	Not likely	Likely	Very likely
Increase prices	□	□	□
Lower profit margins	□	□	□
Cut down output/activity	□	□	□
Contain other costs	□	□	□

33 If in your answer to the previous question you replied that the reduction of other costs is "likely" or "very likely". indicate the main channel through which this goal is achieved:

Please choose one- the most important -factor.

Reduction of flexible wage components (e.g. bonuses, benefits, etc)	□
Reduction of the number of employees with indefinite-length contracts	□
Reduce the number of employees with fixed-length contracts	□
Adjustment of working time (e.g. reduction of overtime hours, annualisation of working hours etc.)	□
Reduce of other costs	□

34 In recent years how relevant have the following factors been in the determination of wages and salaries in your company (please evaluate all factors)?

Please tick an option for each line.

	None	Limited	Important
Productivity changes	□	□	□
Profit developments	□	□	□
Inflation	□	□	□
Wage changes in the market	□	□	□
Availability of suitably qualified employees	□	□	□

Price setting and the link between wage changes and price changes (Questions 35-43)	
This section collects information on price setting procedures, the frequency of price changes and the link between price changes and wage changes. Answers must refer to the main product (service), defined as the one that generated the highest fraction of your company's revenue in 2006.	
35 What share of the revenue generated by your company's main product in 2006 originated from sales in the: [D]	
Domestic market	____%
Foreign markets	____%
Total	100 %
36 How is the price of your company's main product set in its main market? <u>Please choose a single option.</u>	
There is no autonomous price setting policy because:	
- the price is regulated, or is set by a parent company / group	□
- the price is set by the main customer(s)	□
The price is set by the company but following the main competitors	□
The price is set fully according to costs and a completely self-determined profit margin	□
Other (please specify) _____	□
37 To what extent do you experience price competition for your main product in the main market in which this is sold? <u>Please choose a single option.</u>	
Intense competition	□
Strong competition	□
Weak competition	□
No competition	□
38 Assume that the main competitor for your company's main product/service decreases their product price; how likely is your company to react by decreasing its own price? <u>Please choose a single option.</u>	
Very likely	□
Likely	□
Not likely	□
Not applicable to our company	□
39 Companies differ as to speed at which they adjust their prices to changes in demand and production costs. How much time lapses in your company before you adjust prices in each of the following cases: [D]	
How much time lapses before you increase the price of your product as a reaction to a significant increase in the cost of production?	
☐ Months (if a year or less) ☐ Over a year ☐ Not applicable	
How much time lapses before you decrease the price of your product as a reaction to a significant decrease in the cost of production?	
☐ Months (if a year or less) ☐ Over a year ☐ Not applicable	
How much time lapses before you change the price of your product as a reaction to a significant increase in the demand for your product?	
☐ Months (if a year or less) ☐ Over a year ☐ Not applicable	
How much time lapses before you change the price of your product as a reaction to a significant decrease in the demand for your product?	
☐ Months (if a year or less) ☐ Over a year ☐ Not applicable	

40 Which of the following statements best describes the procedure followed for introducing price changes in your company?	
Prices are changed with predetermined frequency (e.g. annually, quarterly)	□
In general prices change with predetermined frequency, but occasionally prices are changed as a reaction to changes in market conditions (e.g. changes in input prices, in the demand for the product etc.)	□
Only as a reaction to changes in market conditions	□
This question is not applicable to our company	□

41 Under normal circumstances, how often does the price of the company's main product typically change? **<u>Please choose a single option, the one that best describes the situation in your company</u>**	
More than once a year:	
- daily	□
- weekly	□
- bimonthly	□
- monthly	□
- quarterly	□
- biannually	□
Once a year	□
Every two years	□
Less frequently than every two years	□
There is no defined pattern	□

42 Under normal circumstances, are price changes concentrated in any particular month/months?
No □ Yes: Jan. □ Feb. □ Mar. □ Apr. □ May □ June □ July □ Aug. □ Sept. □ Oct. □ Nov. □ Dec. □

43 How does the timing of price changes relate to that of wage changes? <u>Please choose a single option</u>	
There is no link between the two	□
There is a link but no particular pattern	□
Decisions on wage and price changes are taken simultaneously	□
Price changes tend to follow wage changes	□
Wage changes tend to follow price changes	□
This question is not applicable to our company	□

Question No.	Definitions and clarifications
1	Full time employees are those employees whose weekly working hours are either those agreed collectively or the normal working hours in this company. Part time employees are those employees whose weekly working hours are less than either those agreed collectively or the normal working hours in this company A contract is of indefinite length if there is no set or implicitly assumed termination date. A contract is of fixed length if this has a termination date set either explicitly or implicitly (e.g. linked to the termination of a project). Trainees are employees who get paid but do not yet fully participate in the production process because they are still receiving training (independently of whether they are formally under an apprenticeship scheme or not).
4	To distinguish between blue and white-collar workers please apply the same classification used for social security purposes. Examples of highly-skilled blue-collar workers: machine operators, persons engaged in freight weighing, foremen etc. Examples of low skilled blue-collar workers: freight handlers, messengers, security guards etc. Examples of highly skilled white-collar workers: accountants, engineers, etc.
6	Please calculate the share of *Labour Costs* (Item 60 of the Greek Code of Accounting Books and Records) in Total Costs.
12	If no sectoral or occupational pay agreements are in force in your company, please indicate what percentage of your employees is paid the basic wage agreed in the context of the National General Collective Labour Agreement.
13	If no sectoral or occupational pay agreements are in force in your company, please indicate the difference (in percentage terms) between the average wage and the basic wage agreed in the context of the National General Collective Labour Agreement.
14	Please calculate what percentage of the item *Labour Costs* (Item 60 of the Greek Code of Accounting Books and Records) represents payments related to company or individual performance.
15,18	Please assume that earnings are adjusted for inflation even if just a part of regular earnings is adjusted for changes in inflation. Regular earnings include the basic monthly/hourly wage and the associated allowances and transfers. Remuneration calculated as a percentage of profits or revenues but not linked to the payments made in each pay period are not considered as regular earnings.
28, 35-43	The main product (service) is that from which the highest share of your revenue was derived in 2006.
39	If you do not know the exact number of months but you know that this period is usually a year or less tick the option *Months* without specifying the number of months. If reaction time is over 12 months then choose the option "Over 1 year".

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