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Send your comments and opinions to:
Publications Division
Bulgarian National Bank
1, Knyaz Alexander I Square
1000 Sofia, Bulgaria
Tel.: (+359 2) 9145 1351, 9145 1978
Fax: (+359 2) 980 2425
e-mail: Dimova.L@bnbank.org
Website: www.bnb.bg

Contents

SUMMARY: This paper presents the key features of the price-setting behavior of Bulgarian firms based on a representative survey on wage and price formation in non-financial enterprises from the manufacturing, trade and services sectors conducted in 2009. The survey incorporates the questionnaire of the Wage Dynamics Network project of the Eurosystem and is also supplemented with additional questions from the earlier Inflation Persistence Network research project. The descriptive evidence from the survey presented in this paper lends support to some of the regularities and stylized facts from the Inflation Persistence Network project. The main results with respect to price-setting patterns, time dependence of price changes and reported speed of price adjustments to positive and negative shocks to costs and demand suggest that prices in Bulgaria can be characterized as flexible. A key finding of the survey is that the wage – price link in Bulgaria is relatively weak compared to the average for the EU countries. The survey also provides evidence that the most important factor driving price increases at firm level is intermediate input costs.

JEL Classification Numbers: E30, D40
Keywords: price setting, survey data

Zornitsa Vladova, Bulgarian National Bank, Economic Research and Forecasting Directorate, Vladova.Z@bnbank.org

Introduction

This paper documents the main characteristic features of the price-setting practices in Bulgarian firms based on a survey that was conducted in 2009 within the Wage Dynamics Network (WDN) project framework of the Eurosystem. The survey applied the harmonized questionnaire of that network and was further extended with questions from the survey part of the earlier Inflation Persistence Network (IPN) research project with a view to exploring in a greater detail the pricing behaviour of Bulgarian firms. The survey has enabled collection of valuable empirical evidence at firm level on wage- and price-setting behaviour in Bulgaria. Information on the latter has generally been rather limited to date and can serve to enrich the macroeconomic level of analysis of wage and price dynamics in the country.

The survey sample comprises 504 enterprises (that employ a total of 19 463 people) from 3 sectors: manufacturing, trade and market services (excluding public and financial services). Targeted firms were limited to those that have at least 5 employees. The survey results are representative for the three sectors.

This paper documents and analyses the key features of the price-setting practices of Bulgarian firms and attempts to draw preliminary conclusions on the relevance of these practices for the overall flexibility of the Bulgarian economy. The paper also addresses one of the main research questions of the WDN project, namely the relationship between wages and prices. This was motivated initially by the findings of the IPN project that suggested that wage stickiness could play an important role in the slow adjustment of prices. Furthermore, the results on the pricing strategies of Bulgarian firms are discussed in the context of consumer price developments in the country over the last years. Additionally, the key findings for Bulgaria are compared with those for EU countries based on the WDN project results as well as with the summary of the IPN survey evidence for nine euro area countries.

The presented comparison of results shows that several of the regularities and stylized facts with respect to firm-level price-setting behaviour found by the Eurosystem's WDN project and the survey part of the IPN project can be traced in the Bulgarian data as well. This happens despite the fact that the survey in Bulgaria was conducted in the period September–October 2009, while the national surveys within the WDN and IPN projects took place under different macroeconomic conditions (the IPN project was carried out in the period 2003 – 2004 and the main part of the WDN project was conducted in the period 2007 – 2008). The year 2009 was the first year of negative economic growth for Bulgaria since 1997. The global economic and financial crisis represented a significant external shock to the economy

following a period of steadily growing capital inflows, accelerating economic activity and development of optimistic expectations of economic agents. Against this background, the sharp deterioration in economic conditions since September 2008 reflected in a significant reduction in industrial export sales was followed by increasing uncertainty in all economic sectors and a radical change in the behaviour of agents. Specifically, the reaction of companies involved cost-cutting strategies, while households increased their saving rate. Despite the significant change in the behaviour of economic agents in Bulgaria, the 2009 survey evidence of common characteristics of firms' price-setting practices with those discovered in the Eurosystem is suggestive that some of these features are generally of a more structural nature or have sector-specific rather than cross-country or cyclical pattern, and therefore have certain stability over time.

The paper is structured as follows. Section 2 describes the survey design, providing information on the questionnaire used, the sample of the survey and the implementation of the survey itself. Section 3 describes the main characteristics of the market environment of the firms in the sample, seeking to identify the market conditions for the price-setting practices of firms. Section 4 presents the main results on the price-setting practices of Bulgarian firms, focusing on pricing strategies, reasons for upward/downward price changes, flexibility of prices and the wage – price link. Section 5 summarizes the main conclusions.

The survey design

The survey questionnaire

The main source of the survey design was the harmonized questionnaire applied within the WDN project framework of the Eurosystem. The questionnaire comprises five main parts (see the whole questionnaire in the Appendix). The first part investigates firms' wage-setting practices. The second part explores the issue of downward wage rigidity. The third part collects information on the reactions of firms to unanticipated significant negative shocks (slowdown in demand, increase in the costs of intermediate inputs and permanent increase in wages). In view of the importance of assessing firms' reaction to positive shocks (e.g. "increase in demand" that is considered relevant from the point of view of the catching-up of the Bulgarian economy and "decrease in the costs of intermediate inputs" that became relevant with the beginning of the global financial and economic crisis in 2008), such questions were also added to the third section of the questionnaire. The fourth section, which provides the core data set for the analysis in this paper,

seeks to investigate in more detail the price-setting behaviour of firms and the frequency of price changes. The final section of the questionnaire examines some firm-level characteristics (e.g. the number of employees, workforce turnover, age and tenure characteristics of the employees and the share of labour costs in total costs).

With a view to deepening the understanding of the price-setting behaviour of Bulgarian firms, the design of the survey additionally drew on the broadly comparable questionnaires applied within the framework of the earlier euro area wide IPN project. In particular, the Bulgarian survey included questions on the importance of various factors for price increases/decreases, on possible reasons for price stickiness, as well as questions on the speed of price adjustments after positive and negative shocks to costs and demand. Another question that was included was whether firms take into consideration the pricing policy of sectoral/branch organizations in case they are members of such organizations. That question aimed to shed further light on the price-setting practices of firms.

In the design of the Bulgarian survey it was also considered adequate to include additional questions that were part of the follow-up WDN survey carried out in the summer of 2009 after the original WDN survey from the 2007 – 2008 period. The aim of the follow-up survey was to explore the key mechanisms underlying firms' adjustment practices during the economic and financial downturn. To address the same research question, the Bulgarian questionnaire was supplemented with a section on the effects of the crisis on firms' activities. Furthermore, in the original sections on downward wage rigidities and reaction to shocks it was underlined that when answering the questions respondents could draw on their experience during the time of the economic crisis.

A relatively small part of the questions in the questionnaire requires quantitative information. The predominant part of the questionnaire requires qualitative answers, either in the form of a specific choice among a number of alternatives or in the form of determining the extent of importance of different factors for firms' decisions and reactions. For the questions related to prices in the sections dealing with reactions to shocks and price setting and price changes, firms are asked to refer to their "main product or service", defined as the one that generated the highest fraction of their revenue/turnover in 2008. For their main market, firms had to refer to the market that generated the highest fraction of revenues from sales of their main product or service in 2008.

In a large of number of questions firms are asked to refer to their "normal conditions and practices" as in the original WDN questionnaire. Although

it was recognized that such specification could be difficult to abide by in a time when firms are experiencing effects of an economic crisis, it was decided to keep that formulation with the objective of staying as close as possible to the original questionnaire applied by the other countries. The reference period for a few of the questions that required a specific year in the original survey (e.g. the size and distribution of the workforce, the share of labour costs, etc.) was set to 2008, that is the last full year for which such data could be available at firm level at the time of conducting the survey. Due to the complex nature of the required information, the survey was intended for representatives of the senior management of firms.

The sample and the implementation of the survey

The survey was conducted in the period September–October 2009 by an external private company. The implementation of the survey was based on a representative sample of 3 broad economic sectors: manufacturing, trade and market services. The choice was motivated by the objective of exploring firm-level wage and price-setting behaviour in sectors where this behaviour is predominantly market-based rather than determined by decisions of administrative and regulatory bodies (e.g. the decision on the price of electricity for households and small firms that is set by the State Commission for Energy and Water Regulation). The design of the survey covered firms with 20 or more employees in the manufacturing sector and firms with at least five persons in trade and business services sectors. The following sectors of the statistical classification of economic activities (NACE rev.2) were targeted:

1. manufacturing (sector C);

2. trade (sector G: Wholesale and retail trade; Repair of motor vehicles and motor cycles)

3. services:

   a. sectors H-J: Transportation and storage; Accommodation and food service activities; Information and communication

   b. sectors L-N: Real estate activities; Professional, scientific and technical activities; Administrative and support service activities

   c. sector R93.2: Activities related to recreation and entertainment

   d. sectors S95-96: Repair of computers, personal and household items; Other personal services.

The survey was carried out mainly in the form of face-to-face interviews; a supplementary approach was email and traditional mail.

The characteristics of the total population of firms in the three broad sectors specified above were drawn from NSI data as of end-2007. The com-

position of the total population of firms (by sector and firm size given by the number of employees) is presented below.

Table 1

TOTAL POPULATION: NUMBER OF FIRMS BY SECTOR AND FIRM SIZE

	Number of employees				
Sector	5-19	20-49	50-249	250+	Total
Manufacturing	-	3076	2192	379	5647
Trade	11743	2349	758	57	14907
Services	9991	2073	940	161	13165
Total	21734	7498	3890	597	33719

Table 2

TOTAL POPULATION: PER CENT OF FIRMS BY SECTOR AND FIRM SIZE

	Number of employees				
Sector	5-19	20-49	50-249	250+	Total
Manufacturing	-	9.1	6.5	1.1	16.7
Trade	34.8	7.0	2.2	0.2	44.2
Services	29.6	6.1	2.8	0.5	39.0
Total	64.5	22.2	11.5	1.8	100.0

The characteristics of the realized sample of 504 enterprises (targeted sample of 500) follow those of the total population of firms (i.e. a proportional representation of the population of firms under study is ensured), with a slight over-representation of the manufacturing sector. The sample in the survey comprises 97 manufacturing firms, 221 trade firms and 186 firms with operational activities in the business services sector. In terms of firm size, small companies (with less than 20 employees) predominate in the sample, accounting for nearly 60% of all firms. The total number of employees covered in the sample is 19 463, with around 40% of them in the manufacturing and another 40% in the trade sector. In the analysis presented in this paper the results are employment-weighted (employment in the firm relative to the total number of employees in the sample) so as to ensure that a higher weight is given to the replies of larger firms as their decisions on wage and price setting are more important for the economy.[1]

[1] Employment-weighted results are also reported for the countries that participated in the WDN survey which allows comparison of results.

Table 3

REALIZED SAMPLE: NUMBER OF FIRMS BY SECTOR AND FIRM SIZE

	Number of employees				
Sector	5-19	20-49	50-249	250+	Total
Manufacturing	2	53	35	7	97
Trade	158	37	23	3	221
Services	139	28	19	0	186
Total	299	118	77	10	504

Table 4

REALIZED SAMPLE: PER CENT OF FIRMS BY SECTOR AND FIRM SIZE

	Number of employees				
Sector	5-19	20-49	50-249	250+	Total
Manufacturing	0.4	10.5	6.9	1.4	19.2
Trade	31.3	7.3	4.6	0.6	43.8
Services	27.6	5.6	3.8	0.0	36.9
Total	59.3	23.4	15.3	2.0	100.0

Market environment for the firms in the sample

Price formation in the three broad economic sectors examined in the survey is first set in the context of the market environment for each of the sectors, considering the fact the price setting depends to a large extent on the specific market environment for firms. The analysis of market conditions is done by discussing the features of the main market for surveyed firms (domestic vs. foreign), the extent of competitive pressures faced by firms, the importance of long-term contracts with clients and the orientation of sales (to other firms vs. to final consumers). Then the respective market structure characteristics for the surveyed firms within the IPN project, one of the two main references for the results for EU countries, are outlined. The IPN survey evidence, which comprises results for nine euro area countries, can be used for comparison of the results from the Bulgarian survey on pricing strategies and reasons for price changes. The IPN provides results on pricing strategies and reasons for price changes at both euro area aggregate level and euro area country level.[2] The WDN results, which have a greater coverage than the survey IPN results as they cover most euro area countries and non-euro

[2] The IPN evidence covers nine euro area countries – Austria, Belgium, France, Germany, Italy, Luxemburg, the Netherlands, Portugal and Spain – and is based on price-setting surveys conducted in 2003 and 2004.

area EU countries, can be taken as reference for the questions on the frequency of price changes, the time dependence of wage and price changes and the link between wages and prices. The summary of the WDN evidence presented by Druant (2009) provides data on the frequency of price changes both across EU countries and on aggregate for the euro area and non-euro area countries. This evidence also covers data on the time dependence of price changes on aggregate for the euro area and non-euro area countries. In addition, the Final Report of the WDN (ECB, 2010) provides country-level evidence on the policies of adjusting base wages to inflation that can be used for comparison with the results for Bulgaria.

For nearly 80% of the companies in the sample the largest part of their revenues in 2008 is obtained from the domestic market.[3] For about 50% of manufacturing companies the main market for their products is the external market, whereas in the trade and services sectors foreign markets are the main market for only 1% and 8% of surveyed firms respectively.

The extent of competitive pressures is assessed by two questions in the survey. In the first one the companies are asked to determine the strength of price competition they face for their main product/service, choosing among the following five options: "severe", "strong", "weak", "no competition" and "don't know". The second question examines how likely it is for firms to decrease the price of their main product/service if their main competitor decreases its own prices, with the possible answers being "very likely", "likely", "not likely", "not at all" and "doesn't apply". According to the first question, 83% of companies regard their competition as high (the number is estimated as the share of firms answering with either "severe" or "strong"), with the trade sector stating to experience the highest competition (92% of all firms in that sector give such an answer). Only a small number of all companies (10%) consider the competition on their main market as low or very low. Based on the second question, 69% of companies are likely to follow the reduction of prices initiated by their competitor. The trade sector perceives the strongest competitive pressures (80% of companies answer with "very likely" or "likely").

The IPN survey project identifies long-term relationships with clients as one of the key factors underlying price-stickiness in the euro area countries. In the Bulgarian survey 35% of the firms have more than 60% of their total revenues coming from sales to partners with whom contracts are defined as long-term. The latter are most prevalent in the manufacturing sector (for half

[3] It is assumed that the main market for companies is the one where they obtain more than 60% of their total revenues in 2008.

of the companies) and least important in terms of share in total revenues in the trade sector (only one fourth of companies in the trade sector report that the predominant part of their revenues is generated from long-term contracts with clients). It should be noted that one third of the firms in the sample did not provide an answer about the importance of long-term contracts.

As regards the customer orientation of firms' sales, around 40% of the surveyed firms deal primarily with other firms (nearly 50% of manufacturing firms and slightly more than one third of trade and business services companies).[4] Only 5% of all firms report final consumers as their main customers. Even in the services sector, only 15% of firms sell mainly to final consumers.

In the IPN survey evidence the sectoral coverage is mostly concentrated on the industrial sector (Fabiani et al., 2005). This implies that when making comparisons on these issues between results for Bulgarian firms and euro area companies, we need to consider predominantly the manufacturing sector. The main market for the surveyed euro area firms in the IPN was the domestic one (for 73% of the companies) which is also largely the case for the firms in the Bulgarian survey, with the slight difference that surveyed firms in the manufacturing sector in Bulgaria report almost equally distributed main revenues generated from the domestic and from foreign markets. The IPN survey results show that firm-customer relationships are determined as long-term by 70% of firms on average for the euro area which is relatively close to the results from the Bulgarian survey, with 50% of firms in the manufacturing sector working predominantly with long-term contracts. Around 60% of the companies that participated in the IPN viewed their competition as high or very high. This is broadly comparable to the 75% of firms in the industry sector in the Bulgarian survey that stated that the market they operate on has high or very high competition.

Overall, the broad similarity of the market environment conditions for the surveyed euro area firms in the IPN (largely from the industry sector) and the market environment for the firms in the industry sector in the Bulgarian survey seems to point to common sectoral characteristics. Nevertheless, differences in overall macroeconomic conditions may be a potential factor affecting the results for pricing strategies applied by both euro area and Bulgarian firms.

[4] We use the same assumption for characterizing "main customer" as in the case of the main market as defined above.

Price-setting behaviour of firms

This section presents the results on the main features of the price-setting behaviour of Bulgarian firms, focusing on pricing strategies, reasons for price changes (price increases and price decreases), flexibility of prices and the link between wages and prices.

Pricing strategies

Firms' price setting rules play an important role in shaping the flexibility of prices in response to shocks to the economy (e.g. related to variation in costs, in demand, etc.) and respectively the adjustment costs of the economy following such shocks. Higher flexibility of prices (as in an environment of perfect competition) lowers the adjustment costs when shocks hit the economy. Furthermore, pricing strategies at firm level provide valuable information that is important for understanding price dynamics in Bulgaria.

As can be seen from the graphs below, the most common price-setting practice among the companies in the three sectors is that of following competitors' prices which may be interpreted as an indication of flexibility of prices in Bulgaria. The relevance of competitors' prices for price setting is reported by 40% of all companies, whereas the second most frequently used pricing rule is that of a mark-up over costs (it was reported by one third of all companies). In general, the predominance of following competitors' prices as a price-setting practice in Bulgaria implies flexibility of prices in the country. A noticeable feature of the results is that about one fourth of firms have no independent pricing policy due to determination of the price by a parent company, price regulation or setting of the price by the main client.

Figure 1

PRICE SETTING BY SECTOR

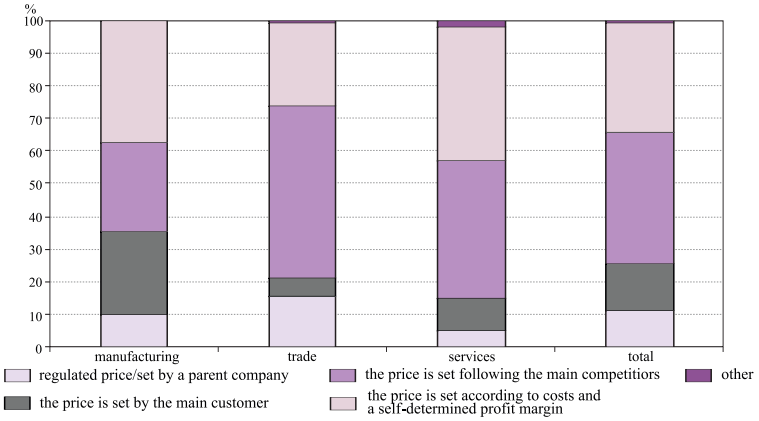
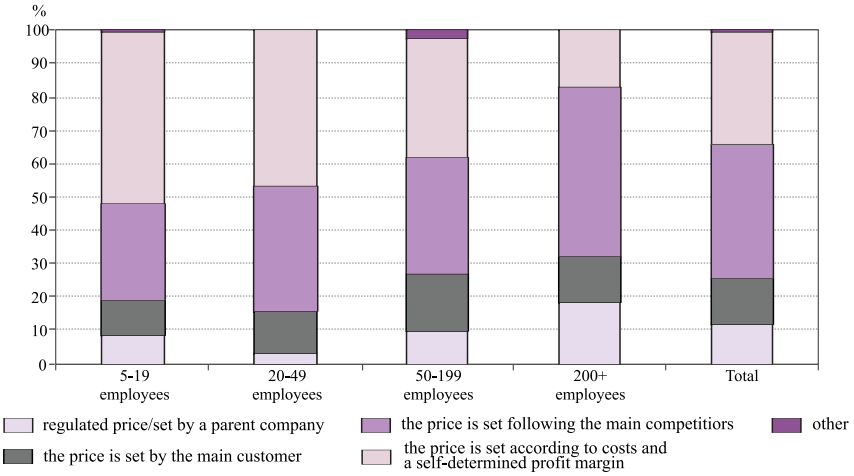


Figure 2

PRICE SETTING BY FIRM SIZE



Price-setting policies differ both across sectors and across firm-size groups. In the manufacturing sector 37% of all firms use mark-up pricing, 35% have no autonomy in their price-setting policy and 30% follow competitors' prices. According to the IPN results on price-setting policies, mark-up pricing is the leading pricing strategy in the manufacturing sector in the euro area (applied by 54% of firms), whereas following competitors determines prices of around 30% of companies.

Prices in the trade sector are set mainly considering competitors' prices (53% of all firms in the sector apply this strategy), while in the services sector mark-up and competitors' prices are equally implemented (respectively by 41% and 42% of companies in this sector). The higher prevalence of following competitors' prices in the pricing strategies of Bulgarian firms in the trade sector, respectively the higher flexibility of prices in this sector, could be explained by the fact that trade companies report that they operate in an environment of higher competition relative to the other two sectors.

The survey also shows that larger firms tend to take into consideration competitors' prices relatively more heavily than small ones and that large companies are also more dependent on external price-setters for their prices (e.g. main customer, parent company or government regulatory agency) and consequently apply less frequently mark-up pricing.

The IPN stylized fact that lower competition makes mark-up pricing a more widespread as a practice appears to be confirmed in the Bulgarian

data too. The descriptive analysis of the data reveals that companies facing stronger competition (those that either perceive their competition as high and/or are likely to follow their main competitor's price decline) tend to resort more to following the main competitors in their price-setting practices.

Figure 3

PRICE SETTING BY PERCEIVED COMPETITION

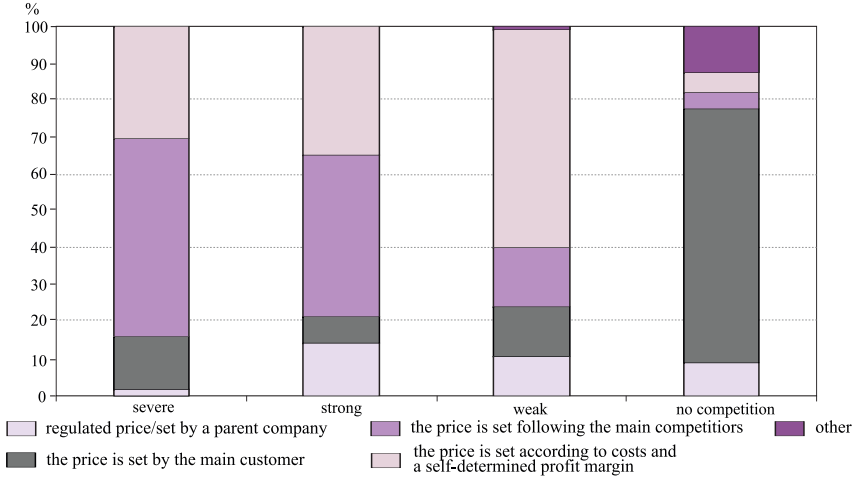
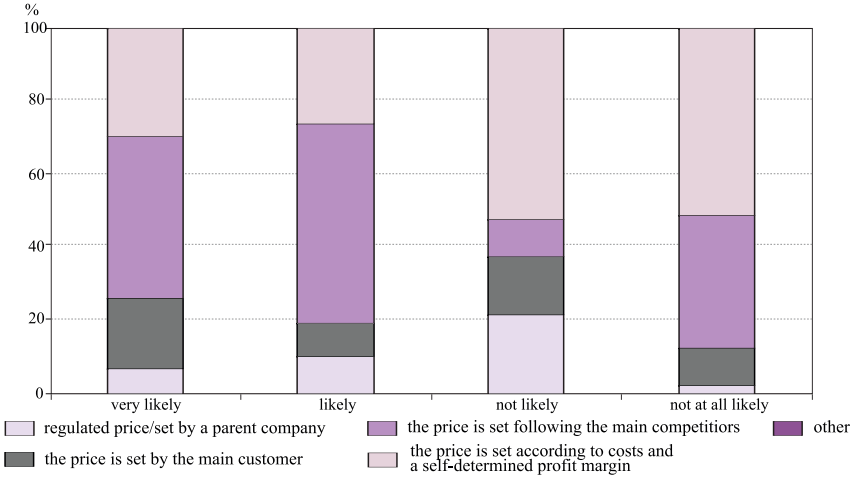


Figure 4

PRICE SETTING BY LIKELIHOOD TO FOLLOW THE MAIN COMPETITOR'S PRICE DECREASE



It is difficult to evaluate the possible effects of the time of implementation of the survey in Bulgaria (during the economic crisis) on the answers of respondents. It is plausible, however, to state that intensification of competitive pressures in some sectors compared to the pre-crisis period (possibly in the trade sector) may have influenced the pricing behaviour of firms towards heavier reliance on market conditions (i.e. through attaching greater importance to the behaviour of competitors).

Another perspective on the issue on price-setting patterns in Bulgaria can be obtained by the question whether firms take into consideration the pricing policy of sectoral/branch organizations in case they are members of such organizations. This question did not feature in the WDN and IPN questionnaires but was included in the Bulgarian survey in order to assess how relevant the possible existence of sectoral/branch organizations for overall price developments is. The survey reveals that on average for the three sectors about 67% of all firms do not participate in such organizations. Out of the remaining firms, however, two thirds declare that do take into account branch policies in their price change decisions, thereby forming almost 22% of all firms in the sample. Across sectors, membership in branch organizations is most prevalent in the manufacturing companies (40% of all companies) and least prevalent in the trade sector (28% of all companies). The manufacturing sector is also the sector where adherence to commonly agreed pricing policies is reported to be stronger (26% of all firms) compared to the other two sectors (where 19% of all firms respectively declare to be abiding by such sectoral policies).

The evidence of some relevance of common sectoral/branch pricing policies and its relation to price developments requires a more thorough analysis that goes beyond the scope of this paper. Nevertheless, it can be maintained that all measures aimed at enhancing competition at national/regional/local level could be conducive to more efficient pricing policies in the future. The analysis of the results of this survey indeed points that stronger competitive pressures are generally associated with higher flexibility of prices at firm level.

Reasons for price changes

Empirical evidence on the determinants of price changes at firm-level allows more profound understanding of the driving factors of inflation dynamics at the aggregate level, including assessment of the importance of some factors that are difficult to model or capture in macro-models. Drawing from the questionnaires used within the IPN project, the Bulgarian survey included two questions on the main factors underlying price changes (one for price

increases and one for price decreases). The questions asked firms to evaluate the relevance for their price change decisions of a number of potential driving forces on a scale from 1 (not relevant) to 4 (very relevant). The potential driving forces for both price increases and price decreases consisted of (increases, respectively decreases) in wage costs, capital (loan interest) costs, intermediate input costs, prices of competitors, demand, regulated prices, inflation (to which prices are indexed), as well as changes in the forecasts on inflation and/or business activities. Apart from these factors, the question on the factors for price increases also included quality improvements, while improvements in productivity were added to the potential factors for price decreases.

Factors for price increases

On average for the three sectors the most important factor driving prices upwards is rising intermediate input costs which have a mean score of 3.4 (obtained as an average from the answers ranging between 1 "not relevant" and 4 "very relevant"). In terms of relevance, the factor related to increases in intermediate input costs stands well above all the other factors. This factor is chosen as very relevant or relevant by 91% of all firms. The importance of intermediate input costs for price increases as reported by firms could be related to one of the driving factors of inflation in Bulgaria, considering the fact that periods of a strong pick-up of inflation over the last years have occurred at times of commodity price increases on international and domestic markets.

Higher quality of firms' products and services is the second most important factor with a mean score of 2.9. Increases in demand and increases in competitors' prices rank third and fourth with mean scores of 2.7 and 2.6 respectively. Labour costs (average score of 2.2) and changes in forecasts on inflation or economic activity (average score of 2.1) are given least importance by firms in their price-increasing decisions.

Labour costs and raw materials prices are the key factors underlying price increases in euro-area countries according to the IPN results. As results for the euro area are based predominantly on firms operating in the industry sector, a more detailed analysis of determinants of price increases by sector in Bulgaria would allow us to gain insight into possible differences/similarities with euro area countries on the importance of different factors for price increases.

Table 5

DRIVING FACTORS OF PRICE INCREASES

	Mean score	% important
Increase in intermediate input costs	3.4	91.2
Increase in quality	2.9	69.1
Increase in demand	2.7	66.3
Increase in competitors' prices	2.6	61.0
Increase in financial costs	2.5	61.0
Administrative increase in prices	2.4	52.3
Increase in inflation to which prices are indexed	2.2	41.1
Increase in labour costs	2.2	36.2
Change in the forecasts on inflation or economic activity	2.1	33.0

Note: Results are employment-weighted. The indicator *% important* is the share of firms answering "very relevant" or "relevant". Firms are asked to evaluate the relevance for their price change decisions of a number of potential driving forces on a scale from 1 (not relevant) to 4 (very relevant). Mean score is the mean (average) result for the relevance that firms attach to each of the factors. Intermediate input costs include purchased goods and services or raw materials.

The breakdown by sector shows that similar to euro area firms, Bulgarian firms in the industry sector consider intermediate input costs as one of the most important factors driving increases in prices. Despite the fact that according to the Bulgarian survey, labour costs are attached somewhat higher relevance in the industry sector than in the services and trade sectors the average score of importance for the industry sector (2.4) is considerably lower compared to the results for euro area countries (average score of 3.0). The Bulgarian manufacturing sector considers quality improvements (average score of 2.9) and increases in demand (average score of 2.8) more important than labour costs in their decisions for raising prices. In contrast, demand factors are reported as relatively less important (2.2) by euro area companies in comparison with Bulgarian firms.[5]

[5] The summary of the IPN results for euro area firms does not include improvement in quality as a factor driving price increases. For this reason, the Bulgarian results of this indicator cannot be compared with those for euro area countries.

Table 6

DRIVING FACTORS OF PRICE INCREASES BY SECTOR AND FIRM SIZE (MEAN SCORES)

	Sector			Firm size (No. of employees)			
	Manufacturing	Trade	Services	5-19	20-49	50-199	200+
Increase in labour costs	2.4	2.0	2.1	2.2	2.4	2.2	2.1
Increase in financial costs	2.6	2.6	2.4	2.5	2.4	2.4	2.7
Increase in intermediate Input costs	3.3	3.6	3.2	3.3	3.5	3.3	3.5
Increase in quality	2.9	3.1	2.5	2.6	3.0	2.7	3.1
Increase in competitors' prices	2.4	2.8	2.5	2.7	2.9	2.5	2.4
Increase in demand	2.8	2.7	2.4	2.5	2.7	2.6	2.8
Administrative increase in prices	2.1	2.8	2.2	2.3	2.3	2.0	2.8
Increase in inflation to which prices are indexed	2.1	2.4	2.3	2.4	2.2	2.0	2.4
Change in the forecasts on inflation or economic activity	2.0	2.3	1.9	2.1	2.0	1.9	2.4

The relatively low relevance of wage costs for price increases in Bulgaria could be attributed to the combination of productivity growth over the last years preceding the crisis and the overall low labour share in the economy. Quality improvements and demand factors as determinants of upward price adjustments are in turn associated with the processes of real and nominal convergence of the Bulgarian economy.

Furthermore, the results by sector show that intermediate input costs are considered most relevant by trade firms (with a mean score of 3.6). A possible explanation for this result is the fact that in the questionnaire 'intermediate input costs' were specified as 'purchased goods and services or raw materials'. This implies that in the trade sector companies have also considered a part of their costs related to the costs of purchased goods. The survey also reveals that advances in quality and increasing demand are much more important in the trade and manufacturing sectors than in the market services sector. Given the higher competitive environment in the trade sector already identified, increases in competitors' prices unsurprisingly rank highest in this sector relative to the other two.

Additional evidence for the importance of demand factors for price increases can be obtained from the question on firms' reactions to an unanticipated significant increase in demand. On that question, 26% of all firms in the survey declare that they would increase the price of their product/service. The predominant reaction of firms to such a shock is hiring more people and/or doing more overtime (stated as relevant by 79% of all firms) and increasing investment and/or buying new facilities (stated as relevant by 71% of all firms).

Factors for price decreases

The information gathered from the survey reveals several main factors for price decreases on average for the three sectors: decline in intermediate input prices, improvements in productivity, weakening demand and lower competitor prices. While comparable results on productivity improvements are not available for euro-area countries, the finding that market conditions (demand and competitors' prices) are a key factor underlying downward price adjustments is one of the robust findings of the survey component of the IPN project.

Table 7

DRIVING FACTORS OF PRICE DECREASES

	Mean scrore	% important
Decrease in intermediate input costs	3.0	82.1
Decrease in demand	2.9	68.2
Improvement in productivity	2.9	72.0
Decrease in competitors' prices	2.8	67.0
Decrease in financial costs	2.3	50.2
Administrative decrease in prices	2.2	47.1
Decrease in inflation to which prices are indexed	2.2	39.4
Change in the forecasts on inflation or economic activity	2.1	37.8
Decrease in labour costs	1.8	18.7

Note: Results are employment-weighted. The indicator *% important* is the share of firms answering "very relevant" or "relevant". Firms are asked to evaluate the relevance for their price change decisions of a number of potential driving forces on a scale from 1 (not relevant) to 4 (very relevant). Mean score is the mean (average) result for the relevance that firms attach to each of the factors. Intermediate input costs include purchased goods and services or raw materials.

Results by sector show that for the trade sector market conditions receive the highest relevance for price decreases of all sectors (mean score of 3.2 for both demand and prices of competitors). In the industrial sector the most important determinant of such adjustments are productivity gains (mean score of 3.1) and the result is in line with productivity growth developments in this sector observed both prior to 2008 and over the period of economic crisis. Another important factor for price decreases according to firms in the industrial sector is lower intermediate input costs (mean score of 2.9). Compared to results for manufacturing firms in the euro area, where as mentioned above market conditions are the main factor for price decreases, we observe a somewhat lower importance of this factor in the manufacturing sector in Bulgaria against the background of somewhat higher relevance of productivity and cost-push pressures from intermediate inputs. In addition, decreases in intermediate input prices score highest in terms of relevance for downward price adjustments in the services sector.

Table 8

DRIVING FACTORS OF PRICE DECREASES BY SECTOR AND FIRM SIZE (MEAN SCORES)

	Sector			Firm size (No. of employees)			
	Manufacturing	Trade	Services	5-19	20-49	50-199	200+
Decrease in labour costs	1.8	1.8	1.7	1.9	1.9	1.8	1.7
Decrease in financial costs	2.2	2.4	2.5	2.5	2.4	2.3	2.3
Decrease in intermediate input costs	2.9	3.1	3.1	3.2	3.3	3.0	2.8
Improvement in productivity	3.1	2.8	2.5	2.6	2.9	2.7	3.1
decrease in competitors' prices	2.6	3.2	2.5	2.9	2.8	2.7	2.9
Decrease in demand	2.7	3.2	2.7	3.0	3.0	2.7	2.9
Administrative decrease in prices	2.0	2.5	2.0	2.2	2.1	1.9	2.6
Decrease in inflation to which prices are indexed	2.0	2.3	2.2	2.3	2.1	1.9	2.4
Change in the forecasts on inflation or economic activity	2.0	2.4	1.8	2.1	2.0	1.9	2.3

Further evidence on the relevance of declines in raw materials prices for price decreases can be obtained by the question on firms' reactions to an unanticipated significant decrease in intermediate input prices. The results on that question reveal that decreasing prices is stated as a relevant reaction by about 60% firms in case of such a shock, which lends support to the finding that declines in raw materials prices are one of the important factors underlying price decreases. This question further shows that increasing profit margins – another option cited as a possible reaction to this shock – is also considered relevant by Bulgarian firms (72% of all firms stated that they would follow such a strategy).

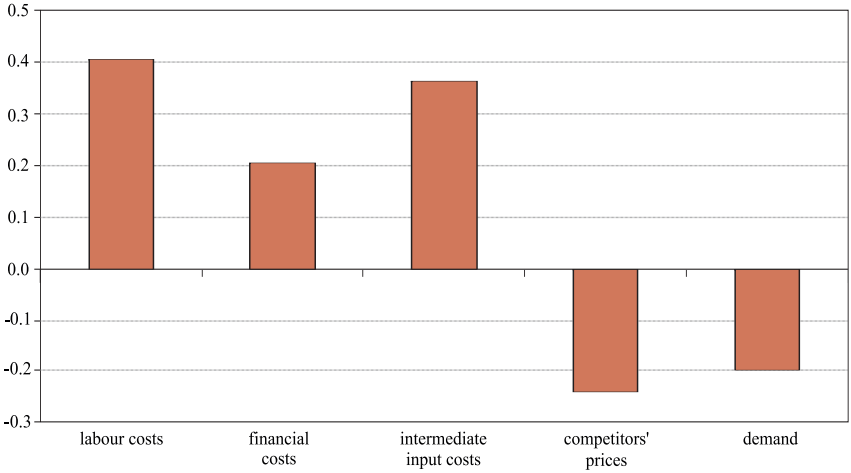
Price asymmetries and impact of competition on pricing policies of firms

Results from the Bulgarian survey appear to confirm an important regularity obtained by the survey part of the IPN project for euro-area countries that relates to the existence of asymmetry of price reactions. The asymmetry of price reactions is based on the fact that costs most often lead to price changes when they increase, while variations in demand are generally more important for price decreases than for price increases. This regularity was confirmed by the survey results for all euro-area countries that participated in the IPN project despite their varying business cycle positions at the time the national surveys were conducted. A survey of the degree of price stickiness in the United Kingdom also showed such asymmetries in price adjustments (Hall et al., 2000).

Following Fabiani et al. (2005) we first take the already obtained mean scores of importance given by firms for price increases and decreases to costs factors (labour costs, financial costs and intermediate input costs) and demand factors (competitors' prices, demand). Then for each of the factors we estimate the difference between the score given for upward price adjustments and the score given to that factor for downward price adjustments. Similarly to the results for euro area countries, we can reach the conclusion that costs are a more relevant factor for firms when they are on the increase and respectively firms increase prices. At the same time, market factors seem to be more important for firms when they deteriorate (i.e. demand contracts or competitors decrease their prices) and then firms lower their prices, whereas improving market factors are somewhat less important for price increases.

Figure 5

PRICE ASYMMETRIES



Note: Following Fabiani et al. (2005) the graph represents differences between the mean scores for price increases and the mean scores for price decreases for each of the cost and demand factors respectively.

Another robust finding of the IPN project that seems to be supported by the Bulgarian survey is that higher competition results in firms attaching stronger importance to changes in underlying factors (particularly in the case of weakening demand) when making decisions regarding price changes. This conclusion can be reached using any of the two measures of competitive pressures faced by firms. As for the surveyed firms in the euro-area countries, when Bulgarian firms are faced with higher competition they appear to attach higher importance to decreasing demand when price change decisions are made than the importance given to decreasing demand in the case when firms are faced with lower competition.

Figure 6

PERCEIVED COMPETITION AND IMPORTANCE OF PRICE-RISING FACTORS

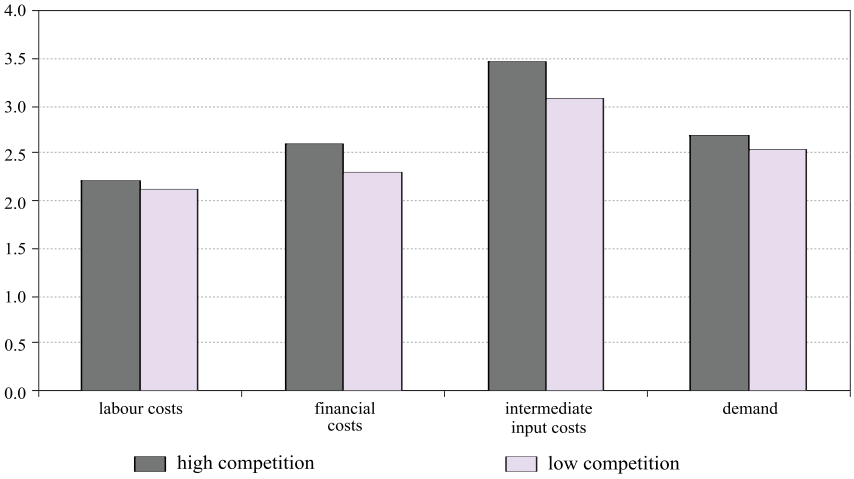
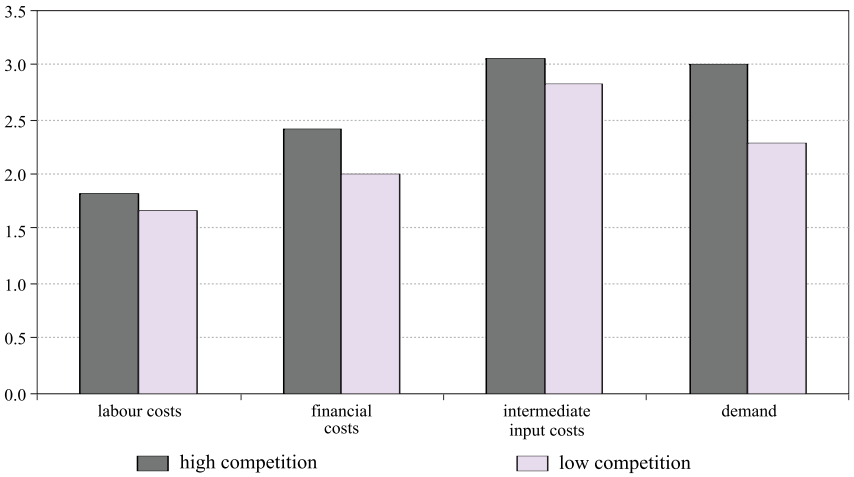


Figure 7

PERCEIVED COMPETITION AND IMPORTANCE OF PRICE-REDUCING FACTORS



Note: The scores for the importance of the different price-raising and price-reducing factors in an environment of "high"/respectively "low" competition are obtained by a weighted average of the scores on "severe" and very strong" competition in the first case and on "weak" or "no competition" in the second case.

Price flexibility

Flexibility of prices can generally be related to the speed of price adjustment that takes place following a shock to underlying factors in the economy (e.g. demand or costs). Some of the most widely used measures of price flexibility include the frequency of price changes (without ignoring the fact that a low frequency is not necessarily an indicator of price stickiness in the absence of variability in underlying factors), the time dependence or concentration of the decisions on price changes in a particular period of the year (higher dependence possibly implying slower reaction to shocks) and the actual speed of adjustment of prices in response to shocks as declared by firms.

Evidence from EU countries both within the IPN and WDN research project has convincingly shown that price flexibility (most often referred to price change frequency) is dependent on a number of characteristics of product markets (type of sector, degree of competition, etc.) and on many firm-specific characteristics such as size of companies, export orientation of their production, structure of costs and composition of the workforce employed in the firm. Consequently, cross-country heterogeneity with respect to price flexibility is relatively subdued, whereas sectoral differences are much more pronounced.

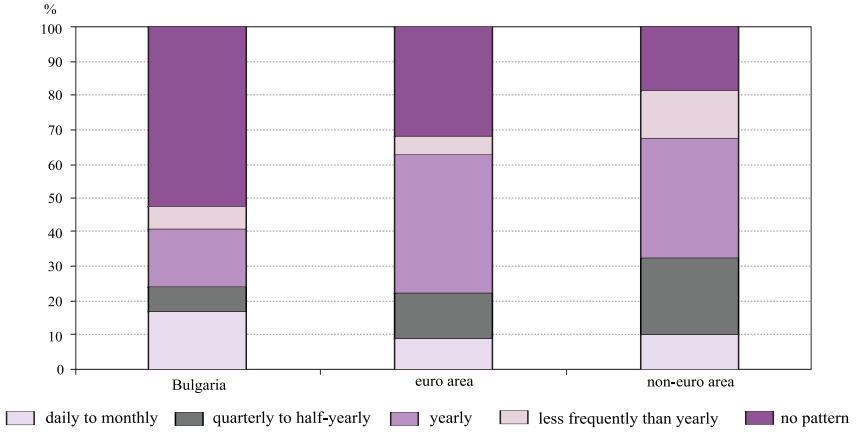
This section examines the results of the Bulgarian survey on price flexibility, looking at the frequency of price adjustments and the time-dependence of price changes and compares them to the results for European firms. We also analyse the evidence on the speed of adjustment of prices to shocks as reported by firms.

Frequency of price changes

The survey reveals that one of the main features of price change frequencies in Bulgaria is that firms generally do not follow a specific time-dependent pattern in their decisions for price changes: 52.3% of firms state that they have no predefined time-pattern, with almost no variation of this proportion across different sectors and firm sizes. The share of firms with no pattern in changing prices (i.e. with irregular price changes) is almost twice as high as the average figure for EU countries. Future research could investigate the possible factors for the relatively high incidence of irregular price changes in Bulgaria and attempt to extract some underlying frequency of these changes.

Figure 8

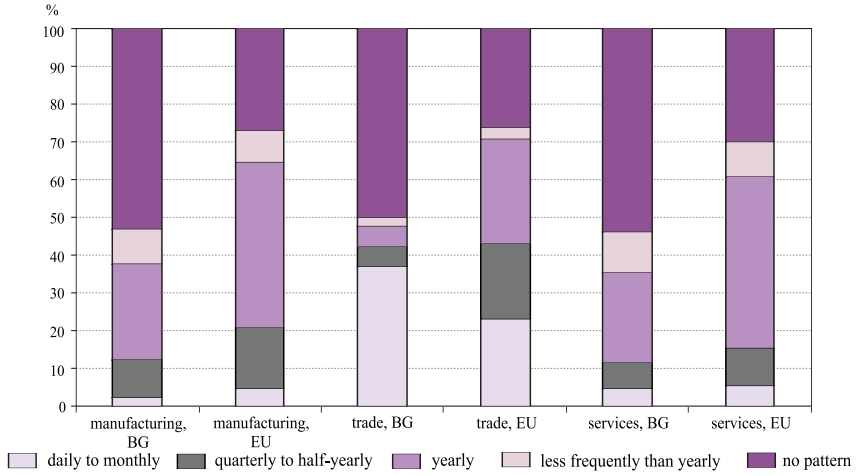
FREQUENCY OF PRICE CHANGES IN BULGARIA AND COMPARISON WITH WDN RESULTS



Source: Druant (2009) for euro area and non-euro area countries.

Figure 9

FREQUENCY OF PRICE CHANGES ACROSS SECTORS IN BULGARIA AND COMPARISON WITH WDN RESULTS



Source: Druant (2009) for EU countries.

The survey results also show that prices in Bulgaria change more frequently than both in euro-area and non-euro area countries. In Bulgaria 16.5% of firms change prices on a daily-to-monthly basis (against 9.2% on average for the EU), 7.5% of firms change their prices on a quarterly-to-half-yearly basis (15.4% in the EU), 17.0% change prices yearly (39.2% in the EU) and 6.7% less frequently than yearly (7.4% in the EU).

As documented by Druant et al. (2009) for the EU countries, clear sectoral patterns in price change frequencies can be seen in the Bulgarian data too. Trade firms tend to adjust their prices much more often than both the manufacturing and services sectors. One of the findings of the survey is that 37.2% of trade firms in Bulgaria change prices with a daily-to-monthly frequency, which is well above the average figure for the EU of 22.9%.

A further analysis of price change frequencies can be done excluding the firms with no defined time-dependent pattern in adjusting prices. This approach follows Druant et al. (2009) who argue that the lack of effective frequency of price changes of the firms "with no pattern" justifies dropping all firms in that category. We note, however, that in the case of Bulgaria such an assumption removes slightly more than half of all companies.

Estimates of the duration of price spells (which is defined as the number of months for which prices remain unchanged) show that on average for the three sectors this duration is lower in Bulgaria (7.7 months) than the average duration obtained from the results for the EU (9.6 months for both euro area and non-euro area countries).[6] Even more importantly, the average time period during which prices in Bulgaria remain unchanged is the shortest among all countries. This result is driven mainly by the extremely short duration of prices in the trade sector (2 months against almost 7 months for the EU). At the same time, price spells in the manufacturing and services sectors are broadly similar (around 10–11 months) which is close to the average EU figures.

In general, we cannot make a clear-cut conclusion about the flexibility of prices in Bulgaria based only on the survey results for the frequency of price changes. The main reason for this lies in the fact that a large number of the companies in all sectors have no predefined time-dependent pattern in the frequency of their prices changes. In addition, when excluding the companies with no time-dependent practice in adjusting prices, the results point to an average duration of price spells in the manufacturing and services

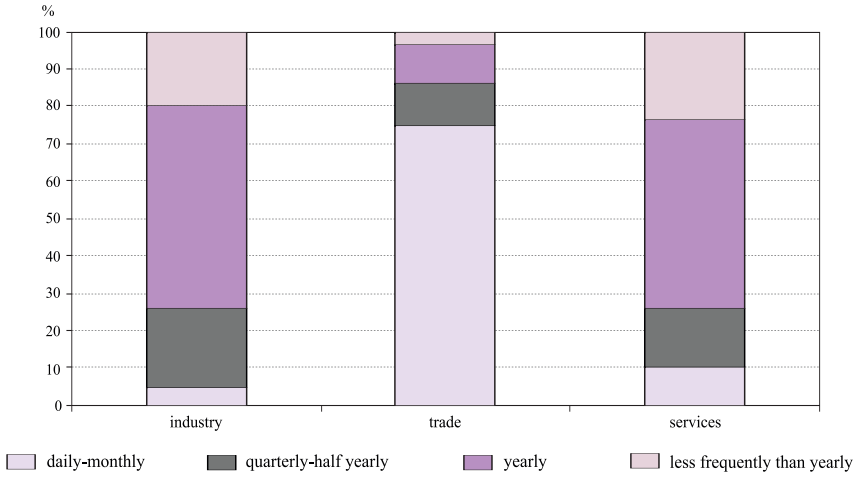
[6] The results from the question on the frequency of price changes form discrete distribution. Therefore, in order to obtain average durations, this distribution is approximated by continuous lognormal distribution. For more details on the estimation, see Druant (2009).

sectors that is close to the results for the EU countries. The relatively higher frequency of price changes in the trade sector against the background of the results for the EU needs to be examined in more detail in future research that could focus especially on the market environment of firms in this sector.

The above sectoral differences with respect to price formation, reasons for price changes and price frequencies lead to the conclusion that the trade sector in Bulgaria is characterized by a very high flexibility of prices that is possibly associated with the environment of relatively high competitive pressures in that sector. The latter may be explained by the increasing competition in that sector over the last years due to the extensive penetration of international competitors on the market and the eventual lowering of the market power of local firms.

Figure 10

PRICE CHANGE FREQUENCY BY SECTOR



The positive link between degree of competitive pressures and frequency of price adjustments is a major finding of both the IPN and WDN projects. It appears to be confirmed by the Bulgarian data not only when considering the price-setting patterns in the trade sector but also when directly examining the distribution of price change frequencies according to strength of competitive pressures. As can be seen, when firms perceive their competition as severe/strong and when they state that they are likely to follow the price decrease of their main competitor, the frequency of reported price changes is generally higher than in the cases when competition is perceived as low and the likelihood to follow the main competitor's price decreases is also low.

Figure 11

PRICE CHANGE FREQUENCY BY TYPE OF PERCEIVED COMPETITION

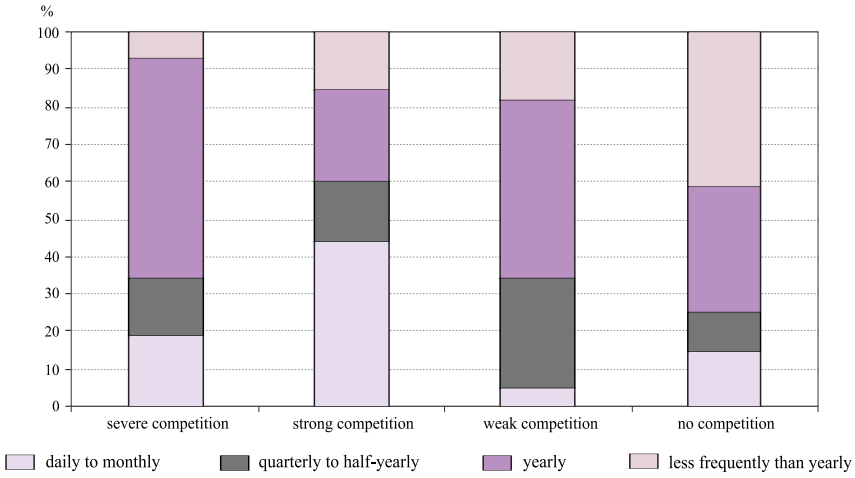
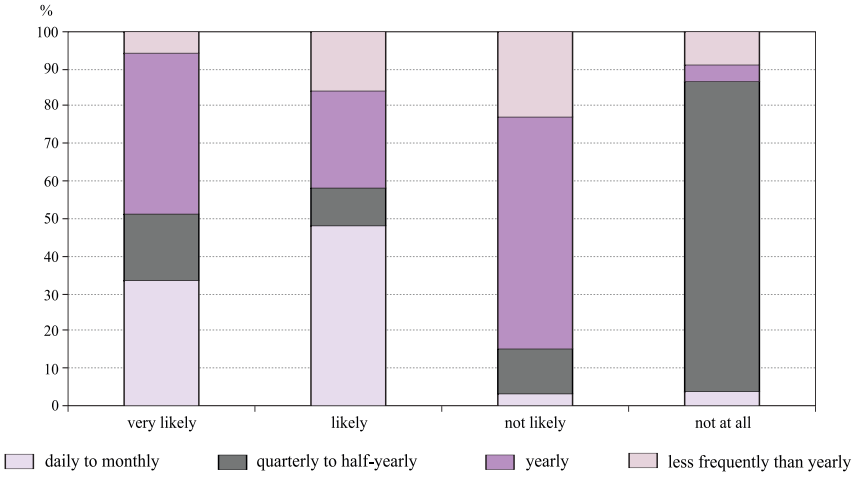


Figure 12

PRICE CHANGE FREQUENCY BY LIKELIHOOD TO FOLLOW THE PRICE DECREASE OF THE MAIN COMPETITOR



Moving beyond the issue of competition and price setting, the Bulgarian survey reveals that two other main results from the IPN and WDN projects on the determinants on price change frequencies – a negative link with the share of labour costs in total costs and a positive link with firms' exposure

to foreign markets – do not seem to hold about Bulgarian firms. A possible explanation for the absence of a link with the share of labour costs could be the relatively low labour share in the Bulgarian economy, implying that labour cost changes are not an important determinant of price changes. This result is also supported by the already obtained evidence from the survey on the determinants of price increases where, as mentioned above, firms do not assign high relevance to increases in wages when raising prices. A factor that may account for the observed absence of an association between the export orientation of firms' production and the frequency of their price changes is the fact that almost one third of the manufacturing companies do not have an independent pricing policy as described in the section on pricing strategies.

Figure 13

PRICE CHANGE FREQUENCY BY SHARE OF LABOUR COSTS IN TOTAL COSTS

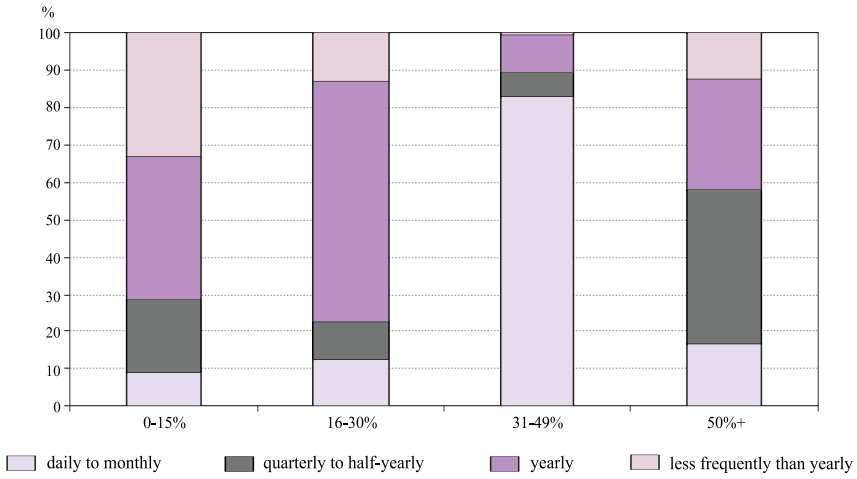
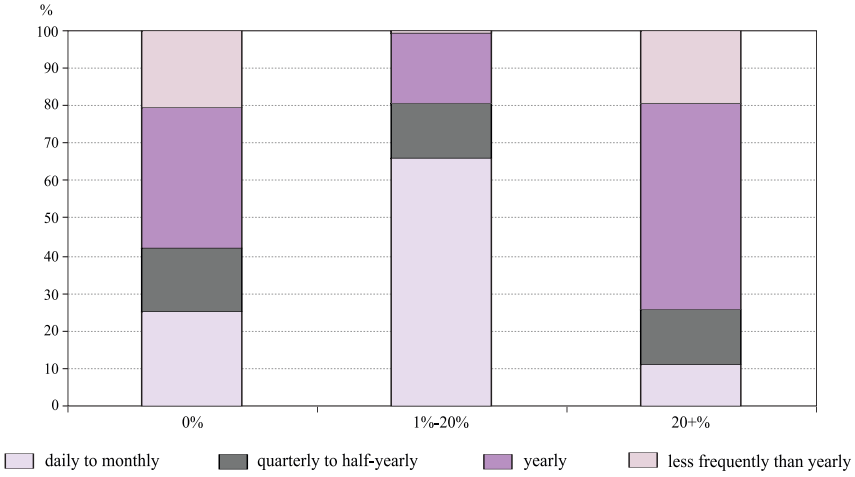


Figure 14

PRICE CHANGE FREQUENCY BY EXPORT SHARE



Time dependence of price changes

The second measure of price flexibility that we examine is the time-dependence in firms' decisions on price changes. Higher concentration of price changes in a particular time of the year (e.g. in the beginning of each year) could be an indication of price stickiness in response to shocks to the economy and delay the adjustment of the economy to these shocks. As observed by Fabiani et al. (2005), time-dependent price setting may be associated with nominal rigidity in prices in the case of shocks.

To assess the degree of time dependence of price changes, the survey includes a question that asks respondents explicitly whether under normal circumstances price changes are concentrated in any particular month/months of the year.

Price concentration in Bulgaria is done by 12% of all firms. This is much lower than the respective average figure for euro area countries (42%) and it is also lower than the average for non-euro area countries (17%). Comparison with non-euro area countries reveals that price concentration in Bulgaria is actually one of the lowest. A price concentration pattern is mostly pronounced in the manufacturing sector (20.5% of firms) and least pronounced in the trade sector (4.9% of all firms follow a time-dependent pattern in price adjustments). The result on the relatively low time-dependence of price adjustments in Bulgaria could be interpreted as an indicator of flexibility of prices in the country.

Furthermore, compared to EU results synchronization of wage and price changes is much less prevalent in Bulgaria due mostly to the low time-dependence of price changes. As in the EU, however, wage concentration in a particular month is higher (43% of firms) compared to price concentration, with peaks in January in both cases.

Figure 15

PRICE AND WAGE CHANGE CONCENTRATION

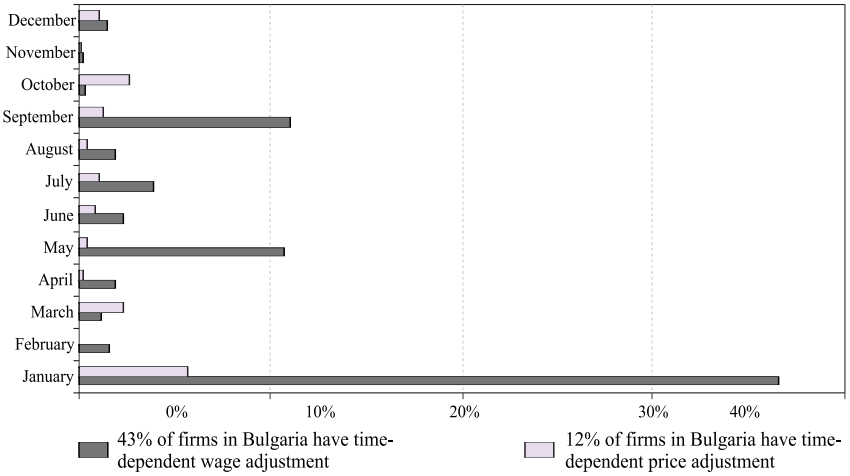
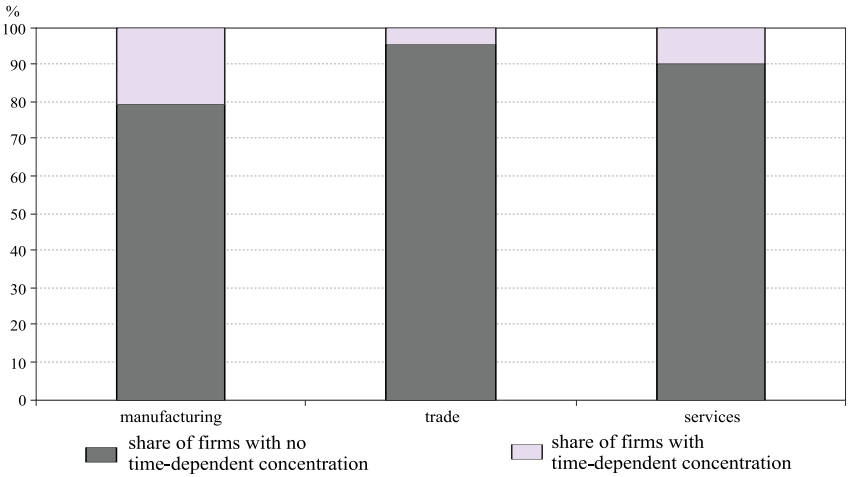


Figure 16

PRICE ADJUSTMENT CONCENTRATION IN A PARTICULAR MONTH(S) OF THE YEAR BY SECTOR



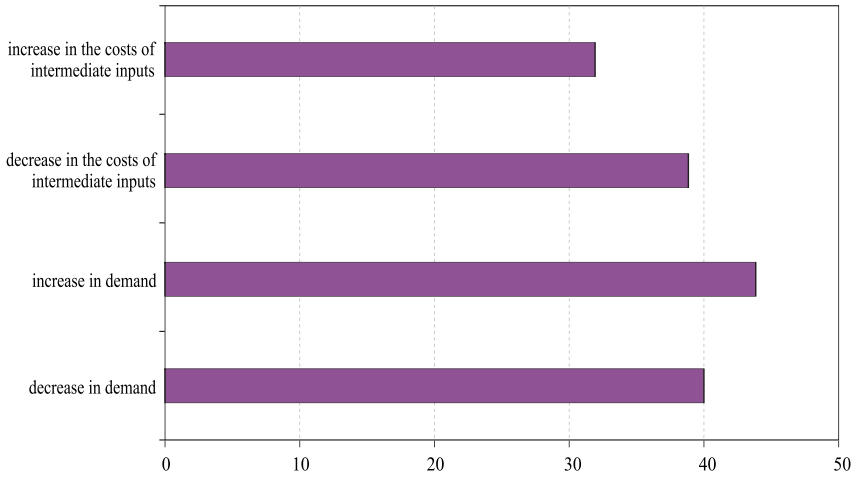
Reported speed of price adjustment after shocks

The third measure that could provide information on the flexibility of prices is the speed with which firms report to make adjustments of prices following the incidence of shocks to the economy. The national surveys conducted within the IPN project contained a number of questions on the speed of price changes in response to shocks, with some of the countries explicitly differentiating their questions with respect to the significance (degree) of the shock. Despite the important information that can potentially be given by the speed of price changes after different shocks, the length and complexity of the questionnaire in the Bulgarian survey did not allow to make a strict differentiation with respect to the degree of the shock. The survey included only one question which asked firms whether they change prices after shocks to demand (increase/decrease) and shocks to intermediate input costs (increase/decrease). Three options were given (prices are changed after a specific number of weeks, prices are changed after a specific number of months and prices are not changed).

The aggregate results for the three sectors reveal that prices in Bulgaria respond quickly to all of the shocks irrespective of their source and sign (positive vs. negative). Unsurprisingly, somewhat faster reaction of prices is observed in the case of changes in the prices of raw materials compared to changes in demand. The median length of price response to lower/higher demand is 6 weeks/5 weeks respectively, with 60% and 56% of all firms respectively responding to these shocks. The median length of price adjustments to declining/rising raw materials prices is 3 weeks for both cases, with slightly stronger response by firms to raw materials price increases (68% of firms) relative to decreases (61% of firms).

Figure 17

PRICE ADJUSTMENT AFTER SHOCKS
(% OF FIRMS NOT CHANGING PRICES)



Wage – price links

The analysis of the link between wages and prices is particularly important because it allows an assessment of the possible short and long-term effects of different shocks to the economy (e.g. an increase in oil prices), including the impact of such shocks on firms' competitive positions. The survey shows that the wage-price link in Bulgaria is weaker compared to the average for the EU countries. As already mentioned in the section on reasons for price changes above, increases in wage costs have very low relevance for firms when upward price adjustments are implemented. Further evidence for the conclusion about a relatively weak wage-price link is given by the results on how firms relate price changes to wage changes, how important it is for firms to increase prices after an unanticipated permanent increase in wages, whether firms have policies of adapting wages to inflation and how frequently wages are changed due to inflation.

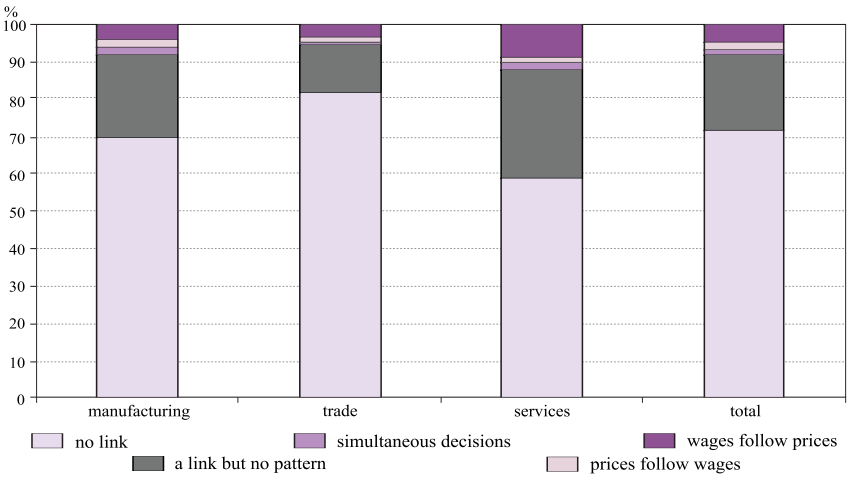
According to the survey 27% of firms in Bulgaria acknowledge that they have a link between prices and wages which is smaller when set against the average figure for the EU (about 40%). Unlike in the EU, however, there are differences in the relationship between wages and prices across sectors.

The link is somewhat stronger in the services sector (40% of firms) relative to the manufacturing sector (30% of firms) and the trade sector (17% of firms).

Further evidence about a relatively weak wage-price link is provided by the fact that only 8% of all firms report to maintain a strong link, almost twice as low as the EU figure. As in Druant et al. (2009), we consider that the link is strong in those firms where there is some specific pattern in the changes in price and wages: decisions about wages and prices are taken simultaneously, prices follow wages or wages follow prices. Again, there are clear sectoral differences in the strength of the link. In the services sector 12% of firms report the existence of a strong link, while the number for the manufacturing sector is 8% of firms and for the trade sector is 5% of firms. It is also noteworthy that the dominant relationship between wages and prices across sectors is that wages follow prices (this direction is reported by 9% of firms in services, 4% of firms in manufacturing and 3% of firms in trade).

Figure 18

RELATION BETWEEN THE TIMING OF PRICE AND WAGE CHANGES



We can also draw inference on the extent to which wage changes have a pass-through to price changes by considering the reaction of firms to an unanticipated permanent increase in wages (in the questionnaire we specified that such an increase could be due to an increase in the minimum wage at a national level). The results show that 43% of firms in Bulgaria (in the sectors covered by the survey) would increase prices in response to such a shock,

whereas in the EU prices will be increased by 60% of all firms.[7] Interestingly, in Bulgaria the strongest reaction is observed in the trade sector: slightly more than half of all firms in this sector state that they will increase prices compared with 39% in manufacturing and 32% in services sectors. This result confirms aggregate statistics on wages in the trade sector which are relatively low, with their dynamics by months showing relation to the increase in the minimum wage in 2009 (BNB Economic Review, 4/2009).

The link between wages and prices can also be assessed with the question whether firms have a policy of adapting changes in base wages to inflation. The results from that question confirm the finding that the link in Bulgaria is lower than on average in the EU.

Table 9

DOES YOUR FIRM HAVE A POLICY THAT ADAPTS CHANGES IN WAGES TO INFLATION?

	Bulgaria	Euro area	Non-euro area
No	75.0%	65.3%	61.9%
Yes	25.0%	34.7%	38.1%

Note: Share of firms. Results are employment-weighted and re-scaled excluding non-responses.
Source: Final report of the Wage Dynamics Network (ECB, 2010) for euro area and non-euro area.

In Bulgaria 25% of firms state that they have a policy that indexes wages to inflation. For the euro area such a policy is applied by 35% of the companies, while in the non-euro area countries wages are adjusted to inflation by 38% of companies.

The evidence on the impact of inflation on wages can be complemented by the question on the frequency of wage changes due to inflation. The results provided by the survey on that question are that wages in Bulgaria are changed mainly because of length of service and reasons apart from length of service and inflation. Wage updates due to inflation are not widespread: a striking difference from the EU where inflation is reported as the main driving factor of frequent changes in wages.[8]

[7] The reported shares of firms for the EU and Bulgaria include the respondents attaching "high relevance" or "relevance" to an increase in prices after a wage shock. Source for the results on EU countires: Final Report on the Wage Dynamics Network (ECB, 2010).

[8] Lozev, I., Z. Vladova and D. Paskaleva, "Wage Setting Behaviour of Bulgarian Firms: Evidence from Survey Data, Bulgarian National Bank, Discussion Paper, DP 87/2011.

Conclusions

The main features of the price-setting behaviour of Bulgarian enterprises in the three sectors covered by the survey (manufacturing, trade and market services) can be summarized as follows.

The survey results suggest that prices in Bulgaria can be characterized as flexible. An indication of the flexibility of prices is given by the fact that the most common price-setting practice among the companies in the three sectors is that of following competitors' prices. The relevance of competitors' prices for price setting is reported by 40% of all companies, whereas the second most frequently used pricing rule is that of a mark-up over costs (it was reported by one third of all companies). Following competitors' prices is the predominant price-setting pattern in the trade sector (53% of all firms apply this strategy) against the background of reported stronger competitive pressures in this sector compared to the manufacturing and market services sectors. The low time concentration of price changes in a particular month(s) of the year, which is among the lowest from the non-euro area countries, and the reported fast response of prices to upward and downward shocks to cost and demand factors also show that prices in Bulgaria can be described as flexible.

No clear-cut conclusion about the flexibility of prices in Bulgaria can be made based on the results for the frequency of price changes. The main reason for this lies in the fact that a large part of the companies in all surveyed sectors have no predefined time-dependent pattern in the frequency of their prices changes. In addition, when excluding the companies with no defined time-dependent practice in adjusting prices, the results point to an average duration of price spells in the manufacturing and services sectors that is close to the results for the EU countries. The trade sector reports much higher frequency of price changes against the background of the results for the EU. This result could be examined in more detail in future research that focuses especially on the market environment of firms in the trade sector.

The preliminary analysis of the results from the Bulgarian survey confirms several main findings from the IPN project. First, higher levels of competition are associated with lower prevalence of price-setting rules based on a mark-up over costs. Second, when firms are faced with high competitive pressures that also possibly imply lower profit rates, firms appear to attach stronger importance to changes in underlying factors (particularly in the case of weakening demand) when making decisions on price changes. Third, higher competition tends to be related to higher frequency of price changes. Conversely, the Bulgarian survey does not appear to confirm the key finding from both the WDN and IPN projects that a low share of labour costs in firms' total costs accounts for a higher frequency of price changes.

A key finding of the survey is that the link between wages and prices is relatively weak in Bulgaria. A specific link between price and wage changes is reported by a lower number of firms compared to average EU figures. In addition, firm-level practices of updating wages to inflation are less widespread than both in the euro area and non-euro area countries. Furthermore, inflation driven wage changes are not widespread, as is the case in the EU, where inflation turns out to be the main reason for such developments. The pass-through from wages to prices is also comparatively weak.

The main factor underlying price increases at firm level is intermediate input costs. Labour costs are significantly much less important in determining upward price adjustments in stark contrast to the euro area where they stand as one of the main factors underlying price increases. Improvements in quality and demand factors rank second and third in importance for price increases respectively and this finding may be attributed to the processes of real and nominal convergence of the Bulgarian economy.

The main results of the survey point to an overall conclusion about flexibility of prices and a comparatively weak wage – price link in Bulgaria which suggests that the economy can maintain its competitiveness with second-round effects being limited in case of negative shocks. The finding about flexibility of prices in Bulgaria lends support to previous empirical results of a generally moderate degree of inflation persistence at an aggregate level in the country.[9] The descriptive analysis of the survey results also provides evidence that higher competition increases the flexibility of prices – a robust finding of both the WDN and the IPN projects. Consequently, measures to enhance competition in Bulgaria will further increase the overall flexibility of the economy with beneficial effects on the convergence process.

[9] For more details see "Empirical Analysis of Inflation Persistence and Price Dynamics in Bulgaria", BNB Discussion Paper, DP/70/2008.

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Appendix

BULGARIAN
NATIONAL BANK

SURVEY
ON WAGE AND PRICE FORMATION IN THE NON-FINANCIAL ENTERPRISES IN BULGARIA

This survey is aimed at collecting information on wage and price setting practices in your firm and at identifying the relationship between wages and prices.

This survey is part of a project undertaken by the Eurosystem which includes the national central banks of euro area countries and the central banks of the other EU member states. The project uses a harmonized questionnaire, which is given to a sample of enterprises in each of the countries.

In Bulgaria the survey is funded by the Bulgarian National Bank (BNB).

The information collected through the questionnaire will be used exclusively for research and analysis purposes and will be disseminated and published outside the BNB only in aggregate format based on the answers by all firms included in the sample. Individual answers by each firm will be treated on a strictly confidential basis.

Participating firms will receive a summary of the main results of the survey.

Your cooperation is extremely valuable, but your participation is totally on a voluntary basis and your eventual refusal to cooperate and participate will not have any implication for your firm.

Instructions for filling the questionnaire:

1. *Who is the most suitable person for filling the questionnaire?* – Due to the complex nature of the questions, the questionnaire should be filled in by members of the senior management of the firm: executive director, finance director or human resource director.
2. *Questions that require answers with numbers* – if you have problems filling up exact numbers, please give your estimate with an approximate answer.

CONTACT DETAILS OF THE PERSON WHO HAS COMPLETED THE QUESTIONNAIRE:

Name: .....

Position: .....

Telephone number: .....

Date: .....

e-mail: * .....

* The summary with the results of the survey will be sent to this email.

Part 1 – Wage setting and wage changes

This part of the questionnaire collects information on wage setting practices and on the frequency and timing of wage changes in your firm. It also focuses on how the wages of new workers are set relative to existing workers.
Unless specifically indicated, answers should refer to "normal conditions and practices" in your firm.

1 – How were your firm's employees distributed across the following occupational groups in the end of 2008?

Please fill in one of the two columns according to your preference: number or %.

Definition for employees: employees are the people who have a labor contract with the employer according to the Labor code, based on which contract they receive remuneration in pecuniary form or in kind as a wage for work done with a certain quantity and quality, regardless of whether the labor contract is permanent or temporary, for full-time or for part-time.

1. Management positions / Other (Class 1 according to the Labor code)	_____ %	_____ (give number)
2. High-skilled white collars/ Experts (Class 2 according to the Labor code)	_____ %	_____ (give number)
3. High-skilled blue collars/ Technical (Class 3 according to the Labor code)	_____ %	_____ (give number)
4. Low-skilled white collars/ Clerical (Class 4 according to the Labor code)	_____ %	_____ (give number)
5. Low-skilled blue collars/ Production (Classes 5, 7-9 according to the Labor code)	_____ %	_____ (give number)
TOTAL	**100 %**	_____ (total number)

Class 1 – Managers and Directors/Other

Class 2 - Analysts/ Experts

Class 3 - Technicians/ Technical

Клас 4 – Administrative positions/ Clerical

Class 5 – Employees providing services to the public, involved in trade or security/ Production

Class 7 –Qualified production specialists/ Production

Class 8 – Machine operators and fitters/ Production

Class 9 – Professions that do not require special qualification/ Production

2 – Does your firm apply a collective contract signed outside the firm (e.g. at the sectoral or occupational level)?

Please choose one answer!

1. No, it does not exist	□
2. No, we opt out	□
3. Yes, we apply it	□ If you have chosen this option, please also answer **question 4**

3 – Independently of what answered in 2, does your firm apply a collective contract signed at the firm level?

1. Yes	□ If you have chosen this option, please also answer **question 4**
2. No	□

4 – If yes in 2 or 3, what percentage of your firm's employees are covered by collective agreements (at any level) ?

_____ %

5 – What percentage of your total wage bill in 2008 was related to individual or company performance related bonuses or benefits?

Definition for bonuses/benefits (flexible wage components): additional material remuneration in the

form of monthly and quarterly bonuses; annual bonuses, 13-th and 14-th wages.

_____ %

6 - Does your firm have a policy that adapts changes in base wages to inflation?

Definition for base wage: direct remuneration (for time worked or for work done) that excludes bonuses / benefits

1. No	□ →If you choose this option, **go to question 8**
2. Yes	□ → If you choose this option, **continue with question 7**

7 -Please choose among the options below, the one that reflects best such a policy.

Please choose one answer!

Wage changes are automatically linked to:	
1. past inflation	□
2. expected inflation	□
Wage changes take into account, without a formal rule:	
3. past inflation	□
4. expected inflation	□

8 - What is the principle of remuneration for the main occupational group (as defined in question 1)?

You may choose more than one answer!

1. Hourly wage	□
2. Piece-rate wage – article 247, paragraph 2 of the Labor code	□
3. Monthly wage (or other period-specific wage, e.g.weekly)	□
4. Other (please specify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

9 - How frequently is the base wage of the main occupational group in your firm (as defined in question 1) typically changed in your firm?

Please give one answer on each row!

	more than once a year	*once a year*	*once every two years*	*less frequently than once every two years*	*never / don't know*
1. Wage changes apart from tenure and inflation	1	2	3	4	5
2. Wage changes due to tenure	1	2	3	4	5
3. Wage changes due to inflation	1	2	3	4	5

10 - Under normal circumstances, are base wage changes concentrated in any particular month / months?

You may choose more than one answer!

1. No □

Yes:

2. January □
3. February □
4. March □
5. April □
6. May □
7. June □
8. July □
9. August □
10. September □
11. October □
12. November □
13. December □

11 - Considering the main occupational group in your firm (as identified in question 1), please indicate among the following options what is the most relevant factor in determining the entry wage of newly hired employees:

Please choose one answer!

1. Collective wage agreement (at any level)	□
2. Wage of similar employees in the firm	□
3. Wage of similar workers outside the firm	□
4. Availability of similar workers in the labour market	□
5. Other (please specify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

12 - If there is abundancy in the labour market of workers you need to hire, do you give newly hired employees significantly lower wage than that of similar (in terms of experience and qualitfication) employees already in the firm?

Please choose one answer!

1. Yes	□
No, because (**please choose only one option, the most important reason**):	
2. It would be perceived as unfair and earn the firm bad reputation	□
3. It would have a negative effect on the work effort of the new employees	□
4. It is not allowed by labour regulation or collective wage agreement	□
5. Unions would contest it	□
6. Other reason (please specify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

13 - If there is a shortage in the labour market of workers you need to hire and attracting new workers is difficult, do you give newly hired employees significantly higher wage than that of similarly qualified employees already in the firm?

Please choose one answer!

1. Yes	□
2. No, because (please choose only one option, the most important reason):	
3. It would be perceived as unfair by existing employees	□
4. It would have a negative effect on work effort of the employees in the firm	□
5. It is not allowed by labour regulation or collective wage agreement	□
6. It would generate wage demand by existing employees	□
7. Other reason (please specify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

Part 2 - Downward wage rigidity and the adjustment to shocks

This part addresses the issue of the presence of (eventual) obstacles to downward wage adjustments and the reaction of firms to different shocks (including in this year in response to the economic crisis).

14 - Over the last five years, has the base wage of some workers in your firm ever been frozen (or are you currently planning to freeze it)?

Definition of freeze in base wage: the base wage remains unchanged in nominal terms from the moment of the last renegotiation of wages to the next renegotiation

You may choose more than one answer! The last two options are not mutually exclusive!

1. No	□
2. Yes, we have frozen the base wage.	Indicate for what percentage of your employees _____ % →If you choose this option, **continue with question 15 and then with question 16**
3. Yes, we are planning to freeze the base wage.	□ → If you choose this option, **continue with question 15 and then with question 16**

15 - Over the last five years, has the base wage of some workers in your firm ever been cut (or are you currently planning to cut it)?

Definition of cut in base wage: the base wage is cut in nominal terms from the moment of the last renegotiation of wages to the next renegotiation

You may choose more than one answer! The last two options are not mutually exclusive!

1. No	□
2. Yes, we have cut the base wage	Indicate for what percentage of your employees _____ % →If you choose this option, **continue with question 16**
3. Yes, we are planning to cut the base wage.	□ → If you choose this option, **continue with question 16**

16 - If yes in either 14 or 15, what was the main reason for freezing or cutting the base wage?

Please choose one answer, the most important reason!

1. Profitability and/or sales went down	□
2. Other costs increased	□
3. Jobs were at risk	□
4. It was imposed by legislation or higher level collective agreement	□
5. Because the worker performance was not satisfactory	□
6. Other (please specify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

17 - How relevant are the following reasons in preventing base wage cuts?

Please give one answer on each row!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. It is impeded by labour regulation/collective agreements	1	2	3	4	5
2. It would have a negative impact on employees' efforts	1	2	3	4	5
3. It would have a negative impact on employees' morale	1	2	3	4	5
4. It would have a negative impact on the firm's reputation	1	2	3	4	5
5. It would mean the best employees would leave the firm	1	2	3	4	5

6. It would imply high costs of hiring and training new employees	1	2	3	4	5
7. It would create difficulties in attracting new workers	1	2	3	4	5
8. Workers dislike unpredictable reductions in income	1	2	3	4	5
9. Employees are concerned with how their wage compares to that of similar workers in other firms in the same market	1	2	3	4	5

18 - Has any of the following strategies ever been used in your firm to reduce labour costs?

Definition of labor costs: wages, salaries, bonuses, costs for annual leave advances/ overtime work /seniority bonuses, social security contributions, indemnity payments, social benefits in cash or in kind, tax contributions, training costs

Please select all the options that apply to your firm!

1. Recruitment of new employees (with similar skills and experience) at lower wage than those who left (e.g due to voluntary quits and retirement)	□
2. Use of early retirement to replace high wage employees by entrants with lower wages	□
3. Reduction or elimination of bonus payments	□
4. Reduction or elimination non pay benefits	□
5. Change in shift assignments	□
6. Slowdown or freeze of the rate at which promotions are filled	□
7. None of them	□
8. Other (please specify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

19 - Has it become easier over the last decade to adjust wages to reduce labour costs?

Please choose one answer!

1. Yes	□ →if you choose this option, **continue with question 20**
2. No	□ → if you choose this option, **continue with question 21**
3. Do not know	□ → if you choose this option, **continue with question 21**

20 - If yes, why ?

Please choose one answer, the most important reason!

1. Competition has become more intense	□
2. There is larger availability of workers on the market	□
3. Trade unions have less power in collective bargaining	□
4. Market regulation has become less tight	□
5. Production is outsourced in markets where labour is cheaper	□
6. Price inflation and inflation expectations are lower and more stable	□
7. Other (please sepcify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

Part 3 - Reaction to shocks

The next questions investigate how your firm adjusts wages, prices, total costs, employment and margins to shocks (including in the current year in response to the economic crisis).

In answering, for prices you should think of the "main product or service, defined as the one that generated the highest fraction of turnover in 2008, and for employment and wages to the main occupational group in your firm (as identified in question 1).

21 - How does your firm react to an unanticipated (significant) slowdown in demand ?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. Increase prices	1	2	3	4	5
2. Reduce margins	1	2	3	4	5
3. Reduce input	1	2	3	4	5
4. Reduce costs	1	2	3	4	5

22 - If the reduction of costs is of any relevance in your answer to question 21, please indicate the main channel through which this goal is achieved:

Please choose one answer, the most important reason!

1. Reduce base wages	□
2. Reduce flexible wage components (for example bonuses, benefits, etc.)	□
3. Reduce the number of regular employees	□
4. Reduce the number of temporary employees / other type of workers	□
5. Adjust the number of hours worked per employee	□
6. Reduce non-labour costs (for example) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

23 - How does your firm react to an unanticipated (significant) increase in the cost of an intermediate input (e.g. an oil price increase) affecting all firms in the market?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. Increase prices	1	2	3	4	5
2. Reduce margins	1	2	3	4	5
3. Reduce output	1	2	3	4	5
4. Reduce other costs	1	2	3	4	5

24 – If the reduction of other costs is of any relevance in your answer to question 23, please indicate the main channel through which this goal is achieved:

Please choose one answer, the most important reason!

1. Reduce base wages	□
2. Reduce flexible wage components (for example bonuses, benefits, etc)	□
3. Reduce the number of regular employees	□
4. Reduce the number of temporary employees / other type of workers	□
5. Adjust the number of hours worked per employee	□
6. Reduce non-labour costs (for example) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

25 – How does your firm react to an unanticipated permanent increase in wages (e.g. due to an increase in the minimum wage) affecting all firms in the market?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. Increase prices	1	2	3	4	5
2. Reduce margins	1	2	3	4	5
3. Reduce output	1	2	3	4	5
4. Reduce other costs	1	2	3	4	5

26 – If the reduction of other costs is of any relevance in your answer to question 25, please indicate the main channel through which this goal is achieved:

Please choose one answer, the most important reason!

1. Reduce flexible wage components (for example bonuses, benefits, etc)	□
2. Reduce the number of regular employees	□
3. Reduce the number of temporary employees / other type of workers	□
4. Adjust the number of hours worked per employee	□
5. Reduce other non-labour costs (for example) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**

27 – How does your firm react to an unanticipated (significant) increase in demand ?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. Increase prices	1	2	3	4	5
2. Hire more people and/or do more overtime	1	2	3	4	5
3. Increase investment and/or buy new facilities	1	2	3	4	5
4. Reduce inventory rather than raising output	1	2	3	4	5
5. Other measures such as _____	1	2	3	4	5

28 – How does your firm react to an unanticipated (significant) decrease in the cost of an intermediate input (e.g. decrease in the price of raw materials, decrease in fuel prices)?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. Reduce prices	1	2	3	4	5
2. Increase profit margins	1	2	3	4	5
3. Increase output	1	2	3	4	5
4. Other (please specify) _____	1	2	3	4	5

29 – If your firm undertakes changes in prices in the case of one or all of the changes in the external environment stated below, how much time passes before that change in prices takes place?

Please tick a box for each line!

Change in the external environment	*Time period for undertaking change in prices*
1. Decrease in demand	In: 1. week(s) – specify a number ..... 2. month(s) – specify a number ..... 3. prices are not changed □
2. Increase in demand	In: 1. week(s) – specify a number ..... 2. month(s) – specify a number ..... 3. prices are not changed □
3. Decrease in the cost of an intermediate input	In: 1. week(s) – specify a number ..... 2. month(s) – specify a number ..... 3. prices are not changed □
4. Increase in the cost of an intermediate input	In: 1. week(s) – specify a number ..... 2. month(s) – specify a number ..... 3. prices are not changed □

Part 4 - Price setting and price changes	
This part collects some information on price setting and the frequency of price changes. The price should refer to the firm's "main product or service", defined as the one that generated the highest fraction of the firm's revenue/turnover in 2008. The main market should refer to the market that generated the highest fraction of revenues from sales of your main product or service.	
30 - What share of the revenue generated by your firm's main product or service in 2008 was due to sales on:	
1. Domestic market	_____ %
2. Foreign markets	_____ %
Total (= 100%)	100 %
31 - What is your market share on your main market?	
1. 0% - 5%	□
2. 6% - 20%	□
3. 21% - 50%	□
4. Over 50%	□
5. I do not know	□
6. It does not apply	□
32 - How is the price of your firm's main product or service set on its main market? **Please choose one answer!**	
There is not an autonomous price setting policy because	
1. the price is regulated, or it is set by a parent company / group	□
2. the price is set by the main customer(s)	□
3. The price is set following the main competitors	□
4. The price is set fully according to costs and a completely self-determined profit margin	□
5. Other (please specify) _____	□
33 - To what extent does your firm experience price competition for its main product or service? **Please choose one answer!**	
1. Severe competition	□
2. Strong competition	□
3. Weak competition	□
4. No competition	□
5. Don't know / no answer	□
34 - Suppose that the main competitor for your firm's main product decreases its prices; how likely is your firm to react by decreasing its own price? **Please choose one answer!**	
1. Very likely	□
2. Likely	□
3. Not likely	□
4. Not at all	□
5. It does not apply	□
35 - In case your firm is a member of a sectoral /branch organization, do you consider the pricing policy of the other members of the organization when taking decisions about your prices?	
1. Yes	□
2. No	□
3. It does not apply	□

36 - Under normal circumstances, how often is the price of the firm's main product or service generally changed?

Please select only one of the options below, the one that applies most closely to your firm!

1. daily	□
2. weekly	□
3. monthly	□
4. quarterly	□
5. half-yearly	□
6. Once a year	□
7. Once every two years	□
8. Less frequently than once every two years	□
9. Never	□
10. There is not a defined pattern	□

37 - Under normal circumstances, are these price changes concentrated in any particular month / months?

1. No □

Yes:

2. January □
3. February □
4. March □
5. April □
6. May □
7. June □
8. July □
9. August □
10. September □
11. October □
12. Ноември □
13. Декември □

38 - How does the timing of these price changes relate to that of wage changes ?

Please choose one answer!

1. There is no link between the two	□
2. There is a link but no particular pattern	□
3. Decisions are taken simultaneously	□
4. Price changes tend to follow wage changes	□
5. Wage changes tend to follow price changes	□
6. Other (please specify) _____	□ If you have chosen this option, please **specify at the empty row in the column to the left**
7. I do not know	□

39 – What is the importance of the factors listed below in terms of a price increase decision?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. An increase in wage costs	1	2	3	4	5
2. An increase in capital (loan interest) costs	1	2	3	4	5
3. Higher prices of purchased goods and services or raw materials	1	2	3	4	5
4. Improved quality of our main product	1	2	3	4	5
5. Our competitors raised their prices	1	2	3	4	5
6. Rising demand of our main product or service	1	2	3	4	5
7. A public agency (e.g. a price regulator) authorised a higher price	1	2	3	4	5
8. We link our price to the general price level (indexation)	1	2	3	4	5
9. Forecasts on inflation and/or business activity have changed	1	2	3	4	5
10. Other (please specify) _____	1	2	3	4	5

40 – What is the importance of the factors listed below in terms of a price decrease decision?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. A decrease in wage costs	1	2	3	4	5
2. A decrease in capital (loan interest) costs	1	2	3	4	5
3. Lower prices of purchased goods and services or raw materials	1	2	3	4	5
4. We improved our productivity	1	2	3	4	5
5. Our competitors lowered their prices	1	2	3	4	5
6. Falling (contracting) demand of our main product or service	1	2	3	4	5
7. A public agency (e.g. a price regulator) called for a lower price	1	2	3	4	5
8. We link our price to the general price level (indexation)	1	2	3	4	5
9. Forecasts on inflation and/or business activity have changed	1	2	3	4	5
10. Other (please specify) _____	1	2	3	4	5

41 – If there are reasons to raise or reduce the price of your main product or service, which of the following factors might prevent such a price change?

Please tick a box for each line!

	not relevant	*of little relevance*	*relevant*	*very relevant*	*don't know*
1. Concerns that our competitors will not change their prices	1	2	3	4	5
2. The concern that we subsequently will have to readjust the price in the opposite direction	1	2	3	4	5
3. We have arrangements with our customers, in which we guarantee to offer our main product at a specific price and that price may be changed only after a rearrangement of our contract terms	1	2	3	4	5
4. We would like to maintain the good relationship with our regular customers (even if we do not have formal arrangements with them)	1	2	3	4	5
5. The price we used up to now was a psychological price (e.g. 9.99); we would change that price only if the new price were also a psychological one	1	2	3	4	5
6. Changing prices entails costs (e.g. related to printing new price lists or catalogues, modifying our website, readjusting our computer system, etc.)	1	2	3	4	5
7. Other (please specify) _____	1	2	3	4	5

42 – What share of your firm's revenues generated by your main product or service on your main market in 2008 is due to sales to partners with whom you have long-term contracts?

1. Specify an answer in %	_____%
998. I do not know	□
999. It does not apply	□

43 – What share of your firm's revenues in 2008 generated by your main product or service on your main market is due to sales to:

1. Wholesalers	_____ %
2. Retailers	_____ %
3. Within the corporate group	_____ %
4. Other companies	_____ %
5. The government	_____ %
6. To consumers (directly, through catalogues, or by Internet)	_____ %
Other channels (such as) _____	_____ %
TOTAL (=100%)	100%

Part 5 – Additional questions on the reaction to the current economic downturn

44 – To what extent is your firm's activity (in terms of turnover) affected by the current economic and financial crisis?

Please choose one answer!

Negatively affected (please specify):

1. marginally □
2. moderately □
3. strongly □
4. exceptionally strongly □

5. Positively affected □
6. Not at all □

45 - To what extent is the current economic and financial crisis affecting your firm with respect to each of the following aspects?

Please select an option for each line!

	Not at all/ marginally	*moderat ely*	*strongly*	*exceptionally strongly*	*don't know*
1. Fall in the demand for your firm's products/services	1	2	3	4	5
2. Difficulty in financing your firm's activity through the usual financial channels	1	2	3	4	5
3. Difficulty in being paid by customers	1	2	3	4	5
4. Difficulty in obtaining intermediate products from your firm's usual suppliers	1	2	3	4	5

46 - In the current economic and financial crisis is your firm benefiting from government measures aimed at avoiding loss of workers or wage cuts?

1. No □
2. Yes □ (Please specify) _____

Part 6 - Information about the firm

47 - Number of workers (including employees and other types of workers) that your firm had at the end of 2008:

Definitions:
PERMANENT FULL-TIME (ARTICLE 136 OF THE LABOR CODE)
PERMANENT PART-TIME (ARTICLE 138 OF THE LABOR CODE)
TEMPORARY (TEMPORARY LABOR CONTRACT (ARTICLE. 67. (1) POINT1 OF THE LABOR CODE) AND LABOR CONTRACT FOR A PROBATION PERIOD (ARTICLE 70 OF THE LABOR CODE))

1. Number of employees _____

Of which: **(please fill in one of the two columns - number or % according to your preference)**	Per cent	Number
2. Permanent full-time	_____ %	_____
3. Permanent part-time	_____ %	_____
4. Temporary	_____ %	_____
TOTAL (= 100%)	**100 %**	
5. Number of other types of workers (e.g. people employed by agencies, consultants, apprenticeships, students, etc.)		Number _____

48 - Number of employees that left the firm in 2008 :

(refers to all types of employees: *permanent full-time, permanent part-time, temporary***)**

_____ (Please specify an exact or an approximate number)

49 - Number of employees that joined the firm in 2008 :

(refers to all types of employees: *permanent full-time, permanent part-time, temporary***)**

_____ (Please specify an exact or an approximate number)

50 - Distribution of the firm's employees by age at the end of 2008 :

1. Less than 24	_____ %
2. 24-54	_____ %
3. 55-65	_____ %
4. Over 65	_____ %
TOTAL (= 100%)	100 %

51 - Distribution of the firm's permanent employees according to tenure at the end of 2008:

1. Less than 1 year	_____ %
2. Between 1 and 5 years	_____ %
3. More than 5 years	_____ %
TOTAL (= 100%)	100 %

52 - First year of operation of your firm:

_____

53 - What percentage of your firm's total costs were due to labor costs in 2008?

_____ %

54 - In which of the following groups does your firm belong to, based on the annual net revenues from sales in 2008 ?

1. up to BGN 1 000 000	□
2. from BGN 1 000 001 to BGN 5 000 000	□
3. from BGN 5 000 001 to BGN 10 000 000	□
4. over BGN 10 000 000	□
5. I do not want to answer	□

55 - Full name of the firm :

_____

56 - Main scope of activity of the firm :

_____ (Please describe as detailed as possible)

56.1. Code based on the National Classification of Economic Activities _____

57 - Please write down (even roughly) how much time did it take you to complete the questionnaire:

_____ (Please specify in number of minutes)

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