



METHODOLOGICAL INFORMATION ON BUSINESS TENDENCY SURVEY

1. Purpose and Scope

The Business Tendency Survey (BTS) is a monthly survey carried out to produce indicators that will reflect the short-term tendencies in the manufacturing industry. The survey compiles the assessments of the senior managers, whose decisions are important for the economy, on the recent past, current situation and their expectations regarding the future course of business environment. BTS has been conducted since December 1987.

BTS was included in the Short-term Business Statistics of the Turkish Statistical Institute's (TURKSTAT) "Official Statistics Program for 2007-2011" prepared in 2006. The studies towards the Programme targets, the harmonization of the BTS with the international standards and the improvement of the scope of the survey units were completed by the end of 2006. Besides, starting from May 2007, BTS has been co-financed by CBRT and the European Commission according to the agreement signed between these two institutions. CBRT has undertaken to conduct the survey according to the "Joint Harmonized EU Programme of Business and Consumer Surveys". Any notice or publication of CBRT reflects only the author's view and the Commission is not liable for any use that may be made of the information contained therein.

Studies towards harmonization of BTS with the international standards started in 2006, first by reviewing the questions of BTS. As a result, the number of questions that were not included in European Union's "Industry Survey" was reduced, while similar questions were fully harmonized. Meanwhile, two different survey forms have been prepared; one for monthly survey and one for quarterly survey. The quarterly survey form, which has been posted to respondents every three months since January 2007 in January, April, July and October, has 28 questions. The monthly survey form, however, comprises only 22 of these 28 questions. Moreover, the scope of the survey units was reviewed in collaboration with TURKSTAT in 2006 and expanded as to be effective starting from January 2007.

The monthly survey is designed to collect the respondents' views regarding production, sale orders, employment, inventories, prices, unit costs, ratio of capacity utilization, inflation (producer prices), interest rate on credits, and general course of the business conditions. Out of these 22 questions, 5 are assigned to the evaluation of the current situation; 15 are assigned to the past and future trends; and 2 questions are assigned to ratios. The 6 questions included in the Quarterly Survey in addition to those 22 questions, are aimed at finding out the factors restricting production, assessment of the level of production capacity, the time required to produce the current orders and the evaluation of the domestic and foreign competitive position. Of these additional questions, one question is assigned to rank various factors in order of importance while the remaining questions are assigned to define the tendencies referring to the past three months and the assessments of current situation. As the general framework of the BTS involves multiple-choice questions, the answers are formulated as follows: "increased, remained unchanged, decreased"; "above normal, normal for the season, below normal"; "will increase, will remain unchanged, will decrease"; "more than sufficient, sufficient, not sufficient"; or "improved, remained unchanged, deteriorated".



Results of the survey are used only to produce statistics with respect to the “privacy rule”, and are not utilized for any other purposes. Individual data obtained from the survey are highly confidential and the privacy rule applies to the publication of the results as well.

2. Survey Frame and Survey Units

The survey frame consists of the survey units of the monthly manufacturing industry production index with the base year 2005. The survey units of the manufacturing industry sector in the Monthly Industrial Production Survey comprise all of the local units of the public sector enterprises and the private enterprises’ local units that generate 90 percent of the total production value of the private sector units with annual average number of 20 or more employees at four-digit sectors of NACE Rev. 2. The survey frame is updated whenever the frame of the Monthly Industrial Production Index is updated.

The scope of the survey is composed by applying cut-off to the production value of the local units with 50 or more employees at three-digit sectors in the frame and updated annually. In this framework, each year, the local units that will be included in the survey are determined according to the criteria that the responding local units generate at least 85 percent of the total production value at the three-digit sectors in the previous year. The respondents of the previous years are included in the survey as long as they are not liquidated, stopped production, or changed their sectors.

Currently 24 manufacturing sectors, 10 to 33 are covered within the NACE Rev. 2 classification. At three-digit level, manufacture of basic pharmaceutical products (211), manufacture of irradiation, electro medical and electrotherapeutic equipment (266), manufacture of musical instruments (322), manufacture of sports goods (323) are not covered. The aggregates of capital goods, durable and non-durable consumer goods and intermediate goods are covered in the classification according to end-use of the products.

Survey units are the local units that are determined according to the cut-off criteria. However, enterprises with more than one local unit within the same three-digit sector can report for all of their activities in one survey form. Within this context, 1600 local units and enterprises were included in the survey in January 2007. Afterwards, the scope of the survey units was updated respectively in 2008 and 2010, and starting from July 2010 the results of the survey have been calculated depending on the responses of the 2328 local units and enterprises.

3. Application of the Survey

The fieldwork period of the survey is between the 1st and 15th of the surveyed month and non-respondents are contacted afterwards.

Responses are received either by post or via the web site of the CBRT depending on the preference of the respondents. Survey forms are sent on the last working day of the month prior to the surveyed month to the respondents who preferred to participate via post. On the other hand, the survey form is made available on the related web address on the first working day of the surveyed month for the respondents who prefer to respond via Internet.



Respondents responding via post could inter-change their preference and join the survey via web site in the following months, once they indicate their preference on the relevant part of the printed survey form.

The respondents failing to respond through the end of the fieldwork period are sent three remainder mails if they participate via Internet, while the respondents responding by post are contacted by phone.

4. Processing the Results

Aggregated monthly results for the overall manufacturing industry are disseminated in the Monthly Report and are available in a time series format on the Central Bank's Electronic Data Delivery System (EDDS). Also, responses given to various questions of the survey are evaluated collectively and summarized in the "Real Sector Confidence Index", which is prepared with a view to building up an indicator for the general tendency of the manufacturing industry in the short term and presented with the Monthly Report. The index is also available as a times series on the EDDS.

Starting from January 2007, BTS results are being published as weighted aggregates. While comparing the survey results with those of the previous years, it should be taken into account that some questions of the BTS have been modified and the scope of the survey units has been extended in 2007. It should also be noticed that the results are presented as weighted aggregates.

Aggregated results for the qualitative questions of the BTS are calculated as weighted percentages of the establishments that responded with the alternative answer choices of these questions such as "increased, remained the same, decreased"; "above normal, normal for the season, below normal"; "will increase, will remain the same, will decrease"; "more than sufficient, sufficient, not sufficient"; or "more optimistic, remained the same, more pessimistic". For the question related to the producer prices inflation, where the answer is given in ratios; and the question related to the duration of production obtained from the records of current orders, where the answer is given in months, the aggregate figures are calculated as the weighted average of the responses. Responses to the question related to the restrictive factors on production are also calculated as weighted aggregates.

Weighting is performed at two stages: First, answers received from the establishments are weighted with the average number of employees of the establishments in the previous year as provided by the respondents once a year, and totaled up to three-digit level classification of the business activities. For the transition from three-digit level to two-digit level, results are weighted with production values, and in transition from two-digit level to the manufacturing industry total, results are weighted with the value-added figures related to the overall Turkish economy. Production value weights at three-digit level have been calculated by using the production data provided by the establishments for the compilation of the Industrial Production Index for the previous year.



Value-added weights have been calculated by carrying the latest available value-added proportions, based on basic prices forward, by using the annual Manufacturing Industry Production Index of the previous year. All weights are updated once a year by using the most recently released data on value-added figures and the annual Industrial Production Index for the previous year.

All responses to the survey questions are checked immediately, and any inconsistencies are notified to firms and corrected if necessary. No correction is made for non-response and the results are not revised in view of responses received after the survey period.

5. Publication

Aggregated results are announced by the end of the surveyed month with a monthly report on the CBRT web site, under the title “Data \ Surveys \ Business Tendency Survey and Real Sector Confidence Index”. In addition, they are available as time-series under “Data\ Statistical Data – Electronic Data Delivery System (EDDS)”.

6. Before 2007

At the outset, BTS was designed in 1987 by using the British Confederation of Industry (BCI)’s Industrial Trends Survey. There were 28 questions in the first monthly survey enquiring the tendencies, expectations and evaluations regarding the general course of the economy, investments, domestic and foreign demand, production and inventories. In consecutive periods, 6 more questions related to the expectations of wholesale prices inflation and borrowing rates were added to the survey to provide input for the monetary policy implementations.

Between 1987-2006, the Survey was carried out using a non-probability sampling method with voluntary participation. In that period, the Survey was conducted with the participation of the senior managers, who accepted to respond to the survey, from the private sector enterprises that were ranked among the “Turkey’s Top 500 Industrial Enterprises” and the “Turkey’s Next Top 500 Industrial Enterprises” lists prepared by the Istanbul Chamber of Industry. As of January 2005, only private sector enterprises were involved in the BTS and in 2006 survey forms were posted to 845 firms on the average.

Unweighted aggregate results of the survey responses received from the private sector firms between 1987 and 2006 are accessible on the CBRT web site under the title EDDS. Changes made to the survey questions are given in the table below.



PREVIOUS-NEW BTS QUESTIONS TRANSFORMATION TABLE

NEW BTS QUESTIONS (QUARTERLY)	NEW BTS QUESTIONS (MONTHLY)	PREVIOUS BTS QUESTIONS (MONTHLY)	EXPLANATION
1	1	15-1	
2	2	9	In new BTS total amount of current orders is asked.
3	3	10	In new BTS amount of existing export orders is asked.
4	4	11	
5	5	15-2	
6	6	-	New Question
7	7	12-2	
8	-	25	Reference period and answering choices are different.
9	-	5	Wording has been changed.
10	-	24	Wording has been changed and answering choices are different.
11	8	-	New Question
12	11	14-2	
13	12	-	New Question
14	-	-	New Question
15	-	-	New Question
16	-	-	New Question
17	9	-	New Question
18	10	14-1	
19	13	-	New Question
20	14	13-1	
21	15	13-2	
22	16	22-2	Wording has been changed.
23	17	3	Wording has been changed.
24	18	21-1	
25	19	21-2	
26	20	30	
27	21	32	
28	22	1	



Between 1987-2006 activity classification of the participant firms were according to the ISIC, Rev.2. In the following Table, activity classification according to NACE Rev.1.1 prepared through consultations with the representatives of 845 firms - to whom the survey forms were sent in 2006 - is given together with the activity classification of the respondents in 2007.

**COMPARISON OF PREVIOUS AND NEW BTS RESPONDENTS ACCORDING TO SECTORAL
BREAKDOWN**

	2007	2006
Sector Groups	Number of Respondents (%)	Number of Respondents (%)
DA -Manufacture of food products, beverages and tobacco	12.1	15.3
DB -Manufacture of textiles and textile products	29.0	22.7
DC - Manufacture of leather and leather products	1.9	1.1
DD - Manufacture of wood products	2.4	1.1
DE -Manufacture of pulp, paper and paper products; publishing and printing	4.1	4.3
DF -Manufacture of coke, refined petroleum products and nuclear fuel	0.5	0.1
DG -Manufacture of chemicals, chemical products and artificial fibers	3.9	8.4
DH -Manufacture of rubber and plastic products	5.8	5.4
DI -Manufacture of non-metallic mineral products	9.7	7.4
DJ -Manufacture of basic metals and fabricated metal products	11.3	10.3
DK -Manufacture of machinery and equipment n.e.c.	5.9	5.1
DL -Manufacture of electrical and optical equipment	5.9	6.3
DM -Manufacture of transport vehicles	4.7	6.3
DN -Manufacturing n.e.c.	2.7	2.6
Other ^(*)	0.0	3.5
Total	100	100

* Sectors other than the manufacturing sectors.