

1. General

The Central Bureau of Statistics collects monthly data from a sample of approximately 2,200 manufacturing establishments. These data are used to prepare the current manufacturing indices, which are an indicator of the development in manufacturing and in the economy in general.

The current publication presents manufacturing indices for 2006, which were calculated based on data collected according to the sample which was replaced in 2004, and on the base of 2004=100.0

Manufacturing indices, which are calculated each month, include the following indices:

- (1) Manufacturing production indices;
- (2) Employment indices (jobs, employee jobs, work hours);
- (3) Revenue indices (for the domestic market and for export);
- (4) Labour cost indices (wages, supplementary expenditures);
- (5) Derived indices (cost and wages per paid work hour, wages per employee job, revenue per job, etc.).

Because the methods of computing manufacturing indices differ from those used to compute all other indices, they are listed in separate sections.

The collected data also provide a basis for summarizing absolute data on the number of employee jobs in manufacturing, as well as data on labour cost and revenue according to industry, sector, and size of the establishment (Tables 1-9).

In addition, Tables 10-11 present data on export intensive establishments – manufacturing establishments whose export constitutes over 50% of their sales value (without VAT) or establishments whose export amounts to over NIS 10 million, which constitutes over 25% of their sales value (without VAT).

Table 12 presents indices of the manufacturing revenue at constant prices, and thus enables the calculation of the real change in manufacturing revenue.

Table 13 presents indices of manufacturing production, number of employee jobs, and indices of actual work hours, according to aggregated groups.

Table 14 presents data on the mobility of workers in manufacturing, which reflect changes in workers absorbed and workers discharged in manufacturing in 2006, compared to 2005.

Publication of Indices

As noted, all the indices as of January 2004 are published according to the base: 2004=100.0. To calculate seasonally adjusted and trend data, and for the convenience of users, the series of manufacturing indices for previous years (as of 1990) were also calculated according to the base 2004=100.0. The calculation was made by dividing indices prior to 2004 by the mean of the indices for 2004, according to the base 1994=100.0. The indices (from the *Monthly Bulletin of Statistics*) are posted monthly on the CBS website (www.cbs.gov.il) by industries in the "Manufacturing" chapter. Additionally, a press release on manufacturing indices is posted monthly on the CBS website.

Approximately one month and 20 days after the surveyed month, a preliminary estimate is calculated and published, based on data from approximately 65% of all sample establishments and including most of the large establishments. A second estimate, based on data from approximately 80% of the sample establishments, is published two months and 20 days after the surveyed month. After an additional month, when additional data are obtained, adjusted indices are published. One month after that (i.e., four months and 20 days after the surveyed month) a final index is published, based on data from approximately 95% of all sample establishments.

2. Main Findings

2.1 Production and Revenue

In 2006, the level of manufacturing production in manufacturing establishments with at least one employee job (excluding the diamond industry) was 9.8% higher (at constant prices) than in 2005, following a rise of 3.7% in 2005 and of 7.0% in 2004 and a continuous decline of 0.3% in 2003, 1.9% in 2002, and 4.9% in 2001. This followed increases in manufacturing production of 10.1% in 2000, 1.4% in 1999, 3.0% in 1998, 2.0% in 1997, 5.0% in 1996 and a rise of 7%-8% in 1991-1995.

Industries defined as "high technology" (see "Manufacturing Industries by Technological Intensity" in Para. 5.1) played a predominant role in manufacturing growth in 1996-2000, and contributed 20% of the 23% increase in total manufacturing production during that period. In contrast to the years 2001 and 2002, when the main decrease in manufacturing production was recorded in high technology industries, the most significant decline – 3.3% in 2003 – occurred in low technology industries, whereas manufacturing production in high technology industries increased by 2.1%. In 2006 as well, the highest increase (21.3%) was also in high technology industries.

**Table A.- Percentage of Change in Manufacturing Production, Number of Employee Jobs and Wages per Employee Job, by Technological Intensity – 1995-2006
(Each Year Compared to the Previous Year)¹**

	Manufacturing – total			High Technology			Medium-High Technology			Medium-Low Technology			Low Technology		
	Pro-duction	Emplo- yee jobs	Wages per emplo- yee job ²	Pro-duction	Emplo- yee jobs	Wages per emplo- yee job ²	Pro-duction	Emplo- yee jobs	Wages per emplo- yee job ²	Pro-duction	Emplo- yee jobs	Wages per emplo- yee job ²	Pro-duction	Emplo- yee jobs	Wages per emplo- yee job ²
1996	5.4	1.6	2.6	12.0	3.4	5.6	2.4	0.9	1.1	6.8	4.9	0.0	0.0	-1.1	2.8
1997	1.7	-1.1	4.5	7.3	4.5	2.7	-2.2	-2.3	2.8	-0.2	-0.4	4.5	0.0	-3.5	4.3
1998	2.9	-0.9	3.5	8.9	4.6	4.3	5.8	-1.0	1.1	-1.9	-2.1	2.1	-0.3	-2.7	-0.4
1999	1.4	-1.5	4.3	6.5	2.2	5.4	-0.8	-1.6	0.5	-2.2	-3.9	1.1	0.3	-1.7	2.1
2000	9.9	1.4	7.0	25.6	7.4	9.8	5.9	0.8	5.8	3.2	0.0	4.2	-0.1	-0.9	5.2
2001	-4.9	-2.9	4.2	-7.4	0.1	2.7	-4.9	-2.8	3.0	-2.3	-2.7	2.9	-4.0	-4.9	2.8
2002	-1.9	-4.0	-4.1	-4.6	-5.6	-4.9	1.4	-3.4	-7.5	1.0	-2.3	-4.6	-2.2	-4.5	-1.8
2003	-0.3	-2.5	1.8	2.1	-1.8	-1.2	-1.7	-4.2	3.8	-0.1	-1.1	1.3	-3.3	-3.3	5.4
2004	6.8	1.1	2.8	15.1	4.5	1.5	0.3	-2.1	2.1	3.4	0.0	3.0	2.2	0.7	2.9
2005	3.7	1.6	2.8	5.4	4.1	2.6	2.0	0.2	4.1	4.8	1.8	0.4	1.2	0.5	2.4
2006	9.8	3.2	2.5	21.3	6.5	1.7	0.1	4.4	0.6	6.2	1.8	3.9	2.9	1.2	1.4
2006 com- pared to 1995	39.2	-3.9	36.5	132.5	33.3	33.9	8.1	-10.8	18.3	19.7	-4.3	19.9	-3.4	-18.6	30.4

¹ The changes were calculated out of the chained series based on 2004.

² Wages per employee job, at constant prices.

Revised data from 8.1.2008.

Manufacturing revenue amounted to NIS 317 billion in 2006, compared with NIS 279 billion in 2005 (a nominal rise of 13%). Sales to the domestic market constitute 57% of manufacturing revenue, and export sales – 43%.

Revenue at constant prices increased by 7.8% in 2006, compared with 2005.

The revenue index at constant prices is computed as follows: The revenue index at current prices is divided by a combined index made up of the index of wholesale prices of manufacturing output for the domestic market and export price indices. The manufacturing production index, which is designed to reflect changes in the added value of manufacturing, is computed by weighting indices of the indicators in which the changes resemble those of added value, such as product output, work hours invested in production and revenue in constant prices.

Table 9 presents a division of data by revenue size groups. Establishments whose revenue reached NIS 100 million and over in 2006 constitute 3.9% of all manufacturing establishments, and employ 51% of all workers in manufacturing. The sales of these establishments was 75% of total revenue in manufacturing. In electronic communication equipment industry, the sales of 26% of all establishments was NIS 100 million and over (89% of the total revenue in this industry), and they engaged 84% of all jobs in this industry.

2.2 Inventory

At the end of 2006 the value of manufacturing inventory was 3.2% higher compared to the inventory recorded at the end of 2005. The data were calculated in fixed December 2000 prices. The increase is due to a 5.2% rise in the value of material inventory.

The share of product inventory in manufacturing establishments, which accounts for 60% of total inventory, corresponds on the average to 20 days of production (or sales). However, industries vary depending on their manufacturing processes. For example, in the food industries, where the manufacturing process is relatively short, product inventory equals 10 production days. In contrast, in the metal, metal products, machinery and electric and electronic equipment industries, where the manufacturing process is longer, the product inventory corresponds to one month of production.

A similar situation occurs with respect to the material inventory. In most industries, the material inventory corresponds to an average of 1.5 months of consumption. The food industry keeps a one-month material inventory, and the metal industry keeps a material inventory for nearly two months.

Table B.- Manufacturing Inventory Indices at the End of 2006 (at Constant Prices)

Base: 100.0 = Last Quarter of 2000

Industry (division)	Total	Materials	Total products	Products in process	Finished products
Total	100.4	105.4	95.6	92.3	97.9
Food, Beverages and Tobacco Industries	94.8	101.1	87.6	66.5	93.8
Textiles, Clothing and Leather Industries	88.9	120.4	61.7	64.5	60.5
Building Inputs Industries	83.5	88.6	74.8	79.2	72.6
Chemicals, Rubber and Plastics Industries	115.1	144.0	92.6	124.9	83.8
Metal and Machinery Industries	88.1	121.3	60.7	57.1	64.6
Electric, Electronic and Transport Industries	107.6	88.6	126.2	105.9	153.6
Paper, Furniture, Printing, Jewellery and Miscellaneous Industries	80.9	82.7	78.5	71.7	79.9

Table C.- Manufacturing Inventory Indices at the End of 2005 (at Constant Prices)**Base: 100.0 = Last Quarter of 2000**

Industry (division)	Total	Materials	Total products	Products in process	Finished products
Total	97.3	100.2	94.6	92.2	96.2
Food, Beverages and Tobacco Industries	104.1	113.7	93.1	68.8	100.2
Textiles, Clothing and Leather Industries	106.7	129.6	86.8	78.3	90.3
Building Inputs Industries	76.9	83.9	64.8	49.5	72.4
Chemicals, Rubber and Plastics Industries	118.1	145.0	97.1	118.9	91.2
Metal and Machinery Industries	80.5	110.3	56.0	53.7	58.4
Electric, Electronic and Transport Industries	95.5	74.4	116.2	107.2	128.5
Paper, Furniture, Printing, Jewellery and Miscellaneous Industries	84.6	83.7	85.8	93.0	84.3

2.3 Employment and Wages

The number of jobs in manufacturing in 2006 was estimated at an average of 348 thousand per month (see the definition of jobs in "Definitions and Explanations" Para. 5.1), compared to 338 thousand jobs in 2005 (an increase of 3%). 19.5 thousand of workers in manufacturing (5.6%) in 2006 were hired through employment agencies. This is an increase of 2 thousand, compared with those hired through employment agencies in 2005. Regarding the number of actual work hours, there was an increase of 3.5%, so that the product per work hour increased in by 6.1% in 2006 compared with 2005.

84.7% of the jobs in manufacturing in 2006 were in establishments in the private sector, 8.0% in establishments in the kibbutzim and cooperatives sector, and 7.3% in the 13 public sector establishments.

The cost per work hour in manufacturing was NIS 65, compared with NIS 63 in 2005. The highest cost was recorded in establishments with 300 jobs and above – NIS 86 per paid work hour per employee job, and the lowest – NIS 31 – was among establishments with 1-4 jobs.

The share of supplementary expenses for wages in 2006 was 18.9%. The highest average annual wages per employee job were recorded in the following industries: electronic communication equipment (NIS 222 thousand), industrial equipment for control and supervision, medical and scientific equipment (NIS 216 thousand), mining and quarrying (NIS 198 thousand), and transport equipment (NIS 176 thousand), whereas the overall average in manufacturing was NIS 124 thousand. The lowest average annual wage was recorded in the leather and leather products and wearing apparel industries (NIS 59-73 thousand per year).

As in previous years, in 2006 the public sector establishments paid the highest annual wages – NIS 227 thousand per employee job, compared to NIS 101 thousand in the kibbutzim and

cooperatives sector and NIS 116 thousand in the private establishments. This is also a result of differences in the distribution and centralization in the establishments of the different sectors.

It should be noted that the public sector establishments are the largest establishments in the economy, with an average of 1,954 jobs per establishment, compared to an average of 26 jobs per establishment in the private sector and 120 jobs per establishment in the kibbutzim and cooperatives sector.

2.4 Export Intensive Establishments

91% of the manufacturing export was carried out by 847 export intensive establishments. These establishments constituted 7.2% of all manufacturing establishments in 2006; they employed 41% of the workers employed in manufacturing, and their revenue was 49% of the total revenue of manufacturing.

The cost per paid work-hour in the export intensive establishments was 32% higher than the average in manufacturing, and amounted to a total of NIS 86. The revenue per job in these establishments is 19% higher than the corresponding revenue in all manufacturing establishments.

The average number of jobs per establishment in the export intensive establishments was 169, compared to an average of 29 jobs per establishment in all manufacturing establishments. 47% of the total revenue of the public sector establishments is the revenue of the export intensive establishments in this sector. This also applies to 50% of the revenue of establishments of the kibbutzim and cooperatives sector, and to 49% of the revenue of the private sector establishments.

2.5 Mobility of Workers

The increase in the employment level in 2006 is a result of expanded employment in some establishments, and the opening of new establishments. However, the decrease in the number of workers in 2006 is due to the reduction of employment in existing establishments and the closing of other establishments.

An analysis of worker mobility by establishments reveals that in 2006, in existing establishments where the number of jobs increased, 21 thousand jobs were added to the manufacturing industry (6.8% of all jobs in manufacturing). By contrast, in existing establishments where employment declined, 13 thousand jobs were deducted from manufacturing. Moreover, new establishments added 14 thousand jobs to manufacturing, whereas establishments that closed during the year deducted approximately 12 thousand jobs.

An analysis of worker mobility by size groups (number of jobs per establishment) revealed that the increase in employment was greater in establishments with 50-99 jobs (6.5%, compared to 3.2% in all establishments). In establishments with 1-19 jobs, employment declined by 3.1%.

Table 14 presents data on the rate of mobility in employment, which is the ratio of absorbed and discharged workers to the total number of workers. The highest mobility rate – 30% – was recorded in small establishments in which there were up to 19 jobs.

Data on mobility of workers exclude workers hired through employment agencies.

3. Methodology for Selecting the Manufacturing Indices Sample

3.1 Survey Population

The survey population includes all businesses that meet two criteria:

Industrial criterion – Establishments belonging to manufacturing industries, as defined in the *Standard Industrial Classification of All Economic Activities 1993*¹, excluding the diamond industry. In the diamond industry, manufacturing activities are combined with commercial activities, and there is no way to obtain reliable data on the aspect of the industry that involves manufacturing (i.e., polishing diamonds).

Economic activity criterion – Establishments with at least one employee job in the business sector, and kibbutz establishments that produce commodities for sale on the market. This population excludes establishments of self-employed proprietors with no employee jobs, non-profit establishments and auxiliary manufacturing units of kibbutzim, which only serve the kibbutz and do not sell their products on the open market (e.g., sewing and metal workshops).

3.2 The Sampling Frame

To derive the sample, it was necessary to obtain a list of all of the establishments belonging to the manufacturing indices survey population (as defined above – henceforth, “the frame”).

The frame was constructed on the basis of the business registry, which was recently established by the CBS. The registry is based mainly on combined information from two files:

- (a) The VAT file of dealers;
- (b) The National Insurance Institute’s employers file.

Kibbutz establishments that operated on a profit-making basis but did not hire employees were treated specially.

Businesses in the registry were classified according to the *Standard Industrial Classification of All Economic Activities 1993*¹.

From the business registry, the establishments that met the criteria described in the “Population” section above were chosen for the manufacturing indices frame. Israeli-owned units that operate outside of the country were not included in the frame. For every establishment in the frame, the revenue and number of jobs were determined in order to establish the sampling size. In cases of establishments that submit reports to VAT as partnership, and for whom consolidated VAT reports are maintained, the revenue of each establishment in the partnership was calculated relative to its size in the partnership.

¹ See: Central Bureau of Statistics, *Standard Industrial Classification of All Economic Activities 1993, Second Edition*, Technical Publication no. 63, Jerusalem 2003.

3.3 The Sample

3.3.1 Sampling Method

In the current sample which was extracted in 2004, the following changes were introduced in the sampling method.

- (a) It was decided that size groups for each sampling unit would be determined by the revenue and not by the number of jobs, as was the case in previous samples. This change was introduced because it was found that revenue is a more efficient estimate of number of jobs than number of jobs is of revenue, and because revenue data are the main indicator for measuring manufacturing production. It should be emphasized that when units are divided into size strata, the number of jobs is also taken into account.
- (b) The sampling method used in previous years was changed from a sample based on probability proportional to size to a sample based on size strata. This change in the sampling method was introduced in order to deal more effectively with the dynamic trends in business over time. According to the previous method, the size of a unit was determined on the basis of the number of jobs, and sampling was proportional to this size in the industry, which is aggregated by size groups. The larger the unit, the greater the sampling probability, to the point of certain sampling. However, in the present sampling method. The size of a unit is determined on the basis of total revenue. Every unit in an industry is categorized into a size stratum on the basis of its size, determined by the total annual revenue. In every stratum a simple random sample is drawn with uniform probability.

3.3.2 Base Sample

When the base sample was being planned, the sampling frame included all of the businesses that were active in 2003 in industries that fit the definition of the survey. The division of units in an industry into size strata was carried out by an algorithm that determines the boundaries of the size strata, and allocates a sample size to each stratum. This is done while maintaining the relative sampling error values of the division variable. In the Manufacturing Indices Survey, the division variable is the total annual revenue of the sampling unit. In each size stratum, businesses are sampled with equal probability, according to the allocation of the sample and the number of businesses in the stratum. The top sampling stratum in each industry was the “take-all” stratum of businesses, and the units belonging to those strata were “take-all” units with a sampling probability of “1”. Other size strata are referred to as “take-some” strata.

The sampling probability of business i in size stratum h is:

$$\pi_{hi} = \frac{n_h}{N_h}, \quad h = 1, \dots, L-1$$

where N_h and n_h are the number of businesses in size stratum h in the frame and in the sample, respectively, and L is the number of size strata. In stratum L , the stratum of “take-all” establishments, $\pi_{Li}=1$ for every i .

For every sampling unit in the frame, a Permanent Random Number (PRN) was assigned, for use throughout its activity period. This number was intended to maintain the long-term continuity of the sample, as far as possible.

3.3.3 Sample of Newborn Business Units

To keep the sample updated and prevent under-coverage of new businesses, a supplementary sample of new businesses is drawn every two months. For that purpose, every two months a frame of newborn business units is compiled, referred to as an “update”. The units in this frame are categorized according to the industry and size into strata according to the distribution boundaries set in the base sample, and a simple random sample without replacement is drawn.

The sampling procedure for business updates is “cumulative sampling”, where the number of units in the sample of newborn businesses depends, *inter alia*, on the sample size that accumulated up to the previous update, as well as on the cumulative sample needed for the present update. In this method, the variation in sample size of the stratum over and above the previous additions to the sample is minimal.

Concomitantly, establishments that have closed are removed from the sample.

3.3.4 The Inflation Factor

The inflation factor of a sampling unit is the inverse of the probability that the unit will be included in the sample, and expresses the number of establishments that it represents in the sample (the inflation factor of a “take-all” establishment is 1).

The inflation factor for size stratum h in an industry is:

$$W_h = \frac{N_h}{n_h} \quad h = 1, \dots, L$$

Manufacturing estimates are derived by multiplying data for all of the establishments by the weight of each establishment, and then summing them up at the level of groups, industries, and total manufacturing.

4. Methods of Calculating Bases and Indices

4.1 The Base

It was determined that the base for calculating manufacturing indices in the new sample would be 2004=100.0 (mean). To determine that base, new establishments were approached in an attempt to collect detailed data on revenue, labour cost, and employment for the entire year of 2004. The total data for establishments in the new sample over the 12 months of 2004, inflated by the inflation factor, constitute the base for calculating the indices.

4.2 Indices of Revenue, Employment and Labour Cost

The indices of revenue, employment, and labour cost at the level of groups, industries, and overall manufacturing are calculated as the ratio of the data on establishments after inflation in the current period, to base data. The derived indices are calculated as the ratio of the indices. Thus, the index of paid work hour labour cost is calculated as the index of the total labour cost divided by the paid-work-hour index.

Additionally, revenue and labour cost indices are calculated in constant prices. Measures relating to labour cost indices are divided by the Consumer Price Index, whereas the index of revenue in constant prices is calculated by dividing the index of revenue in current prices by the combined index of wholesale manufacturing product prices and export prices.

4.3 Indicators, Weights, and Method of Calculating the Manufacturing Production Index

Manufacturing Production Index

The aim of the manufacturing production index is to reflect monthly changes in the volume of production, which is the added value of manufacturing in each manufacturing industry.

In practical terms, there is no way to obtain monthly reports on changes in the added value for computation of the index. Therefore, other indicators and variables are used, for which the changes are similar to those of the added value. For example: production of commodities, work-hours invested in production, and revenue at constant prices, or a combination of indicators. Indices are calculated for the indicators (the changes in the indicators versus the base period) within the group. The indices of the indicators for each group are weighted by the weights of the indicators, to obtain a production index for the group. Indices for the industry and for total manufacturing are weighted according to the added value of the groups in the industry and overall manufacturing.

Indicators

In the new system, the indicators and their weights for calculating the manufacturing production index every month were updated. The number of groups and their weights by type of indicator are presented in table D.

Table D.- Indicators and Number of Groups Measured, by Type of Indicator

Type of indicator	New Sample		Old Sample	
	No. of groups	Weights of manufacturing production index	No. of groups	Weights of manufacturing production index
Total	121	100.00	121	100.00
Commodities ¹	10	6.26	15	9.95
Commodities ¹ + revenue ²	17	15.14	19	13.33
Revenue ² + work hours	48	40.62	48	45.90
Revenue ²	43	32.10	36	28.90
Commodities ¹ + work hours + revenue ²	3	5.88	3	1.92

¹ Amounts of production.

² Revenue in constant prices.

Manufacturing Production Weights

When the indices were changed to the new base 2004=100.0, the weights used to calculate manufacturing indices were updated (the previous sample of the production index was calculated according to the 1994 weights).

The weight of each group is the total added value in 2004, which was calculated as the difference between the estimated outputs and estimated inputs during that year. The base for calculating these estimates was the summaries of inputs and outputs for manufacturing industries in 2002 at 1995 prices, which include imputation for establishments with 1-4 jobs. Two types of adjustments were made to these data:

- (a) Inputs and outputs for 2004 were adjusted in 1995 prices, according to the manufacturing production index and on the assumption that the input-output ratios remained stable.
- (b) The estimates of inputs and outputs for 2004 were adjusted in current prices, according to input-output price indices for 2004 in 1995 prices. More specifically: indices of production prices in every group were calculated as a weighted index of domestic sales (wholesale price index of manufacturing output) and the index of export prices. The price indices of inputs were calculated as a weighted index of inputs from imports and inputs from domestic production (according to the weight of inputs in the input-output table, 1995). Afterwards, the added value for 2004 was calculated as the difference between output and input. This added value will be referred to henceforth as "extrapolated added value for 2004".

The summary of data for employee jobs in the new sample reveals that the figures for total manufacturing in the previous sample were about 2.9% higher than those in the new sample. At the level of groups, the differentials were even greater.

Therefore, the weights obtained according to the above list were adjusted according to the proportion of change in the number of employee jobs in each group in the new sample versus the previous sample, and the same proportion in total manufacturing.

Table E presents the new weights for the calculation of the manufacturing production index, by industry, for 2004.

**Table E.- Added Value Weights for Manufacturing Industries for 2002 and 2004,
in Percentages and Manufacturing Production Index Weights in 2004,
by Industry (Industry)**

Code	Industry (division)	Added Value Weights 2004		Manufacturing Production Index Weights, 2004
		2002 Survey data	Extrapolation data for 2004	
	Manufacturing – Total	100.0	100.0	100.00
13	Mining of minerals, and quarrying of stone & sand	2.7	2.8	2.64
14-15	Food products	10.1	11.8	11.94
16	Beverages and tobacco products	1.9	1.7	1.70
17	Textiles	3.2	3.0	2.77
18	Wearing apparel (excl. knitted)	1.2	0.9	0.81
19	Footwear, leather and leather products	0.3	0.3	0.21
20	Wood and wood products (excl. furniture)	0.7	0.6	0.55
21	Paper and paper products	2.1	2.2	2.28
22	Publishing and printing	4.8	4.8	4.86
23-24	Chemicals, chemical products and refined petroleum	12.7	15.5	15.43
25	Plastic and rubber products	5.1	5.3	5.65
26	Non-metallic mineral products	2.9	2.8	2.78
27	Basic metal	1.4	1.6	1.64
28	Metal products	10.6	11.5	10.05
29	Machinery and equipment	3.4	2.1	2.49
31	Electric motors and electric distribution apparatus	1.8	1.8	2.00
32	Electronic components	5.8	5.2	5.15
33	Electronic communication equipment	5.9	4.6	4.64
34	Industrial equipment for control and supervision, medical and scientific equipment	13.6	12.4	12.67
35	Transport equipment	5.7	5.6	5.86
36	Furniture	2.6	2.3	2.30
38	Jewellery, goldsmiths' and silversmiths' articles	0.6	0.4	0.45
39	Manufacturing n.e.c.	0.9	0.9	1.14

Formula for Calculating the Production Index for Groups

To calculate the production index for group I_k

$$I_k = \sum W_{kj} \times I_{kj}$$

Where k = group;

j = indicator number;

I_{kj} = index of indicator j in group k ;

W_{kj} = weight of indicator j in group k ;

Where:

$$\sum_j W_{kj} = 1$$

Formulas for Calculation of the Production Index for an Industry and for Total Manufacturing

The industry index, which is the sum of the groups – mainly industries in manufacturing – is the weighting of indices for groups by the weights of the industries, which add up to 1. More specifically:

(1) Calculation of the production index for industry I_r

$$I_r = \sum_k W_{rk} \times I_k$$

where W_{rk} - the group weight in an industry

$$\sum_k W_{rk} = 1$$

(2) Calculation of the production index for total manufacturing I_T

where W_k is the weight of the group and $\sum W_k = 1$

$$I_T = \sum W_k \times I_k = \sum W_r \times I_r$$

where W_r is the weight of an industry in total manufacturing

$$\sum W_r = 1$$

5. Definitions and Explanations

5.1 Definitions

Jobs (formerly: employed persons) – Employee jobs, owners and unpaid family members, kibbutz members, workers employed through employment agencies (in monthly estimates, jobs are calculated excluding workers employed through employment agencies).

Employee jobs (formerly: employees) – All workers on the employee payroll, including members of co-operative societies, as well as workers from Judea, Samaria and the Gaza Area. Unsalaries kibbutz members employed in a kibbutz establishment are considered to be owners. Self-employed persons engaging in piecework for the establishment are not included.

For an explanation on employed persons, employees/jobs, and employee jobs, see: The Central Bureau of Statistics, *Statistical Abstract of Israel 2007*, no. 58, in the Introduction to Chap. 12 “Labour and Wages”, p. (95).

Actual work hours – include the overtime hours and do not include paid absence hours (such as sickness days, vacations, etc.), or working hours of proprietors and their family members.

Wages (formerly: wages and salaries) – All payments on which income tax is due (before deduction of taxes) appearing in employee payrolls, including: basic salary, and the following increments: cost of living, professional, seniority, and family allowances (excluding employees’ children allowance) and travel allowance, premiums, incentive pays and overtime payment, absence (e.g., vacation, sickness, religious holidays), convalescence, professional literature and “13th-month” salary, as well as car allowance (including allocations for a vehicle owned by the employer’s vehicle and used by the employee), telephone, clothing per diem expenses (on which only income tax is due), and payments in kind (e.g., meals, holiday gifts, and housing), as well as one time payment, shift work, on-call pay, bonuses, proficiency allowance and retirement grants.

Labour cost – include, in addition to wages, supplementary expenses for wages and other cost components such as the employer’s portion in payments to national insurance, training funds, pension funds, severance pay by the establishment, transport of workers, upkeep of cafeteria, worker training expenses, etc. These data, after “smoothing” the non-recurrent payments (see paragraph 5.2), serve for calculating the index of all payments related to engaging workers – the labour cost index. (See detailed definition in the paragraph “Definitions of Wages, Compensation and Labour Cost” in Chapter 14 – National Accounts – *Statistical Abstract of Israel 2007*, No. 58).

Paid hourly labour cost index – calculated as the ratio of the total labour cost index to the paid-work-hours index for all employees.

Wages per paid-work-hour per employee job index – is obtained by dividing the wages index of employees (except non-recurrent payments and back pay for previous periods) by the paid-work-hours index (these are actual paid work hours and paid hours of absence).

Revenue (sales value) at current prices, includes: the value of the product sold for the local market and for export and the value of goods from the establishment’s product distributed among the workers; income from work (including repairs) performed for other establishments or persons with their materials; excluding the value of materials belonging to the establishments that commissioned the work; the value of the products manufactured by the

establishment for its own use; purchase tax and excise duty paid by the establishment; value added tax placed on the sales value. The sales value does not include subsidies and export incentives.

Manufacturing industries by technological intensity¹ – high-technology industries include electronical industries, aircraft and pharmaceutical products. Medium-high technology industries include chemical industries (excluding pharmaceutical products), machinery, electrical equipment and transport equipment (excluding aircraft). Medium-low technology industries include mining and quarrying, non-metallic minerals, rubber and plastic products, basic metals and metal products. Low-technology industries include food industries, beverages and tobacco, textiles, wearing apparel, leather and leather products, paper, printing, wood and wood products.

5.2 Explanations of the Data Used for the Estimates

Collection – The data used to prepare the indices are gathered from manufacturing establishments. The data on establishments with up to nine employee jobs are received from administrative sources: data on the number of jobs and the wages are received from the National Insurance Institute, and the revenue data – from the Value Added Tax system.

Imputation – Data that were not received while calculating the indices were imputed according to the changes in the recorded data.

The “smoothing” system of the non-recurrent payments – Usually, non-recurrent payments and back pay relate to a period of a few months. Since it is impossible to receive from the establishments an accurate data of these payments according to the months they relate to, and since there are serious fluctuations concerning the sum of the non-recurrent payments, it was decided to include in the moving average wages for each month the non-recurrent payments and back pay of the last four months (the reported month and the preceding three months). For some of these establishments, the data received referred to payments which are divided backwards, throughout the entire year.

¹ See: Central Bureau of Statistics, *Standard Classification of All Economic Activities 1993*, Second Edition, Technical Publication No. 63, Jerusalem, 2003.