Distr.
GENERAL

CES/SEM.53/3
9 March 2005

ENGLISH
Original: RUSSIAN

STATISTICAL COMMISSION and ECONOMIC COMMISSION FOR EUROPE

STATISTICAL OFFICE OF THE EUROPEAN COMMUNITIES (EUROSTAT)

CONFERENCE OF EUROPEAN STATISTICIANS

Joint UNECE/Eurostat Seminar on Business Registers
(Luxembourg, 21-22 June 2005)

USE OF THE BUSINESS REGISTER FOR SMALL BUSINESS MONITORING IN KAZAKHSTAN

Paper submitted by the Statistical Agency of the Republic of Kazakhstan*

1. The development of small businesses in Kazakhstan is one of the priorities of current economic policy. The great attention paid to aspects of small business development is increasing the demand for statistical information about this phenomenon. The requirements of the State bodies include monthly data on enterprises constituting legal entities and quarterly data for all enterprises, i.e. both legal and natural persons. The deadlines for data to be presented are very tight - by the fifteenth day after the accounting period.

2. To meet the requirements of the State bodies, the National Statistical Agency has devised a method of producing statistical data for monitoring small businesses. The method is based on use of the business register, does not entail conducting additional surveys of small enterprises, and has been applied successfully in Kazakhstan since 2000.

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GE.05-30551 (E) 060405 130405

3. The main provisions of the methodology are as follows:

(a) An analysis of the reports of small enterprises over a series of years shows that there is a close correlation between the number of enterprises and their main economic indicators. Calculations were performed for each stratum of enterprises, as defined by kind of activity and size of the labour force. The correlation between the number of enterprises and turnover was from 0.71 to 0.86. Between the number of enterprises and the number of persons employed by them it was from 0.79 to 0.96 (see annex 1). The correlation shown makes it possible to conclude that statistical estimates of turnover and the number of employees in small enterprises can be obtained from data on the number of enterprises.

(b) To reduce the amount of work needed for the computations and also to ensure comparability with the data of the statistical surveys conducted, the following algorithm is used to calculate the estimates (see annex 2):

- For each branch (NACE) the trend is constructed from actual data (Y1) and the value of turnover (Y2) determined is refined by using indices of the seasonal, cyclical and irregular components of the time series (Y3);

- Standardized rates of turnover per enterprise are calculated from the actual data before starting the monitoring and thereafter adjusted quarterly. The weighted-average standardized value should correspond to the average actual value of turnover per enterprise taking into account coefficient C1. The application of this coefficient is required because the average turnover of enterprises covered by the monitoring is lower than the average turnover of all small enterprises covered by the statistical survey. The monitoring does not include small enterprises where the value of assets exceeds the established limit value;

- The number of enterprises covered by the monitoring is determined from the data of the business register. The legislation has defined seven criteria to distinguish between enterprises and all of these criteria can be taken into account on the basis of the register;

- Estimates of turnover are made from multiplying the number of enterprises by the standardized rates of turnover for the enterprise strata. The standardized rates are not revised during the quarter, but one third of the standardized rate is used per month for estimates;

- The deadline for obtaining estimates is the fifteenth day after the accounting period, whereas the deadline for receiving reported data is the fifty-sixth day. After processing of the results of the statistical observation, the reported data are compared with the monitoring estimates. At this point, the reported data need to be converted into a comparable form using coefficients C1 and C2. The second coefficient is necessary since the number of enterprises surveyed and that of small business enterprises may differ substantially;

- Using indices of the physical volume of output, monitoring can be conducted when there is only an annual survey of small enterprises.

(c) The larger the number of enterprises, the more accurate the estimates are likely to be. Estimates for the republic as a whole are reliable enough, but those for individual regions have a higher margin of error. When producing data broken down by individual region or where there is a limited number of enterprises, the quality of the statistical estimates can be improved by identifying non-typical enterprises. Such enterprises are taken in this methodology to mean the following:

- Units having extreme indicator values, i.e. ones with a turnover exceeding the limit values for the given enterprise stratum;

- Units not having extreme values, but heavily influencing the final estimate because of their large sampling weight.

Non-typical enterprises can be identified on the basis of the business register, as well as from the statistical survey data available. Calculations show that the proportion of non-typical enterprises averages about 2%. When calculating the monitoring indicators of small enterprises, an individual approach is usually applied to non-typical enterprises. For example, in the calculations for non-typical enterprises, their latest reported data or data held in the business register are used. Figures for the remaining enterprises may implicitly be considered as typical and can therefore be obtained from multiplying the number of enterprises by the average value corresponding to them.

(d) Whether this approach can be applied depends on the quality of the business register and the frequency with which it is updated. A business register has been used since 1999 in Kazakhstan and serves as the basis for conducting all statistical surveys of enterprises. The register is maintained in on-line mode and updated daily. The republic has introduced a process of registration in one window, making it possible to ensure 100% coverage of the enterprises registered. Practice shows that having such a register helps to produce a large quantity of statistics characterizing not only the number and structure of enterprises, but also the number of persons employed and the turnover in small enterprises. The average expected values of the indicators for the enterprise strata can be used to obtain summary data by kind of activity, region, employment, etc.

(e) Stratification by number of employees and kind of activity is done only for enterprises constituting a legal entity. Information in the business register about individual entrepreneurs is not yet sufficiently complete and reliable. Datasets for individual entrepreneurs are therefore compiled on the basis of consolidated fiscal authority records of tax payments, i.e. without using the business register.

4. Use of the business register for monitoring the development of small businesses has helped to reduce the time needed for providing data from 56 to 7 days and to switch processing of the data from a quarterly to a monthly periodicity. The burden on small enterprises has not grown with this procedure, and the cost of data production has been markedly reduced.

Annex 1

CORRELATION COEFFICIENTS

Between the number of enterprises and the number of persons employed

NACE	Number of persons employed					
	Under-5	5-10	11-20	21-30	31-40	41-50
01-02	0.91	0.85	0.87	0.81	0.80	0.89
05-05	0.82	0.80	0.79	0.80	0.80	0.78
10-14	0.90	0.88	0.84	0.85	0.80	0.83
15-37	0.95	0.92	0.93	0.90	0.86	0.88
40-41	0.86	0.84	0.81	0.83	0.79	0.80
45-45	0.93	0.85	0.86	0.84	0.80	0.81
50-52	0.96	0.94	0.93	0.86	0.87	0.89
55-55	0.85	0.84	0.84	0.79	0.78	0.82
60-64	0.94	0.91	0.83	0.80	0.79	0.80
70-74	0.95	0.91	0.92	0.83	0.81	0.79
80-80	0.81	0.80	0.79	0.80	0.78	0.79
85-85	0.85	0.84	0.83	0.78	0.79	0.80
90-93	0.87	0.87	0.85	0.81	0.80	0.80

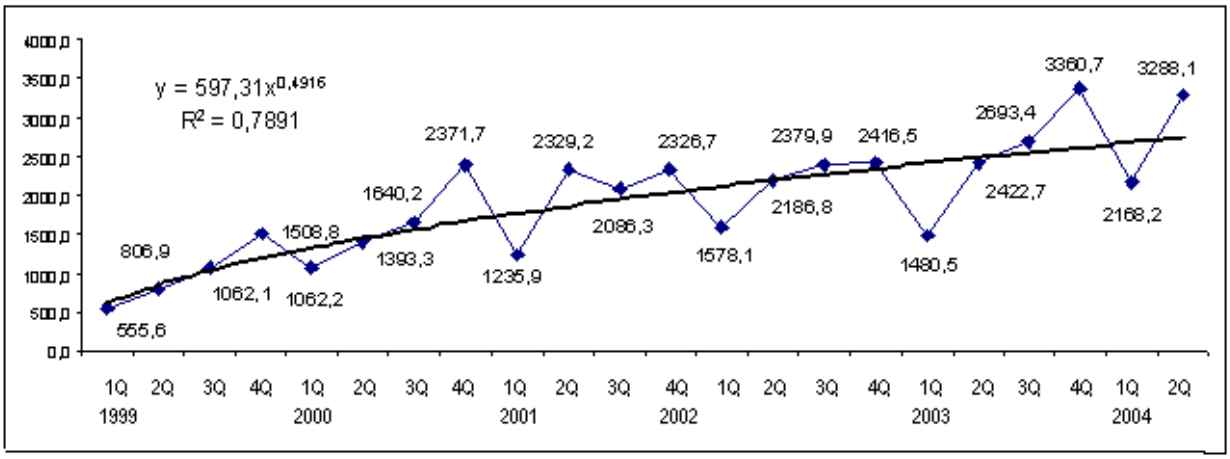
Between the number of enterprises and turnover

NACE	Number of persons employed					
	Under-5	5-10	11-20	21-30	31-40	41-50
01-02	0.86	0.83	0.85	0.85	0.84	0.82
05-05	0.84	0.83	0.84	0.82	0.83	0.84
10-14	0.85	0.84	0.86	0.81	0.81	0.83
15-37	0.86	0.77	0.82	0.83	0.85	0.81
40-41	0.83	0.75	0.73	0.71	0.76	0.75
45-45	0.85	0.73	0.85	0.84	0.84	0.77
50-52	0.86	0.78	0.81	0.80	0.79	0.79
55-55	0.79	0.77	0.77	0.73	0.70	0.71
60-64	0.84	0.81	0.80	0.83	0.78	0.81
70-74	0.85	0.79	0.82	0.84	0.81	0.79
80-80	0.86	0.84	0.83	0.85	0.82	0.83
85-85	0.85	0.81	0.86	0.82	0.79	0.80
90-93	0.84	0.78	0.81	0.83	0.80	0.78

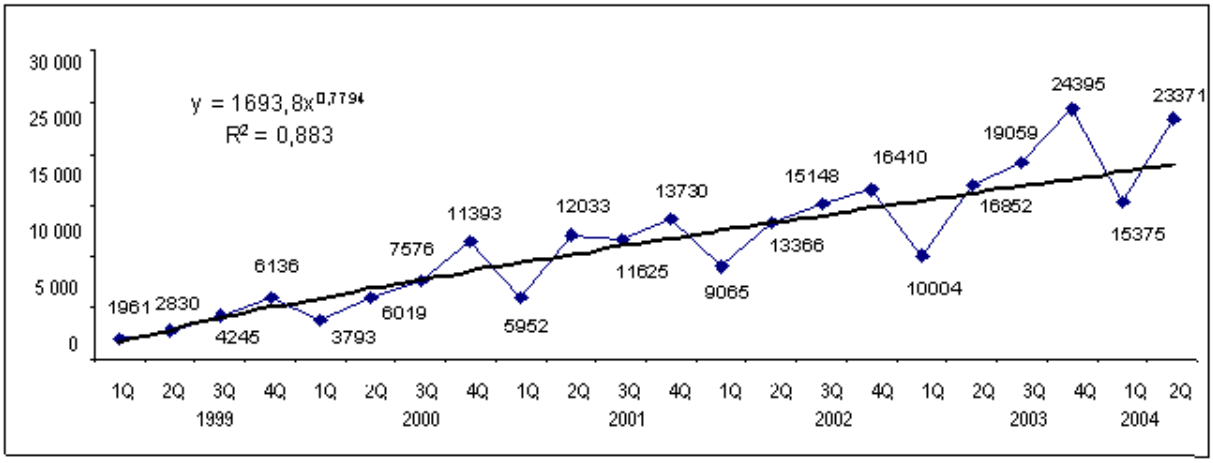
Annex 2

MANUFACTURING (NACE 15-37)

Turnover per enterprise, thous. tenge



Turnover by kind of activity, mln. tenge



For 2nd quarter 2004

	Number of persons employed						
	Under-5	5-10	11-20	21-30	31-40	41-50	
Number of enterprises surveyed, units							7 108
Turnover per enterprise (standardized), thous. tenge	2 043.9	2 168.4	2 760.0	3 427.8	4 278.6	7 251.6	
Number of small business enterprises, units	3 061	907	822	369	172	219	5 550
Turnover ($У_4$), mln. tenge	6 256.4	1 966.7	2 268.7	1 264.9	735.9	1 588.1	14 080.7

15-37	$У_1$	Ymov.av		Si	Ci*Ii	$У_2$	Si*Ci*Ii/ 1,000	$У_3$
	Source data on turnover, mln. tenge	Moving average	Yi/ Ymov.av	Seasonal index	Index of cyclical and irregular variability	Trend value, mln. tenge		Estimated turnover values, mln. tenge
Y1 1Q99	1 961			67.8	170.73	1 693.8	1.16	1 964.8
Y2 2Q	2 830			101.6	95.80	2 907.3	0.97	2 820.1
Y3 3Q	4 245	4 022.0	105.5	104.4	101.93	3 987.8	1.06	4 227.1
Y4 4Q	6 136	4 649.7	132.0	123.6	99.48	4 990.1	1.23	6 137.8
Y5 1Q00	3 793	5 464.7	69.4	67.8	94.15	5 938.0	0.64	3 800.3
Y6 2Q	6 019	6 538.2	92.1	101.6	86.56	6 844.7	0.88	6 023.3
Y7 3Q	7 576	7 465.2	101.5	104.4	94.02	7 718.5	0.98	7 564.1
Y8 4Q	11 393	8 486.8	134.2	123.6	107.62	8 565.1	1.33	11 391.6
Y9 1Q01	5 952	9 744.6	61.1	67.8	93.50	9 388.6	0.63	5 914.8
Y10 2Q	12 033	10 542.7	114.1	101.6	116.20	10 192.1	1.18	12 026.7
Y11 3Q	11 625	11 223.8	103.6	104.4	101.43	10 978.0	1.06	11 636.7
Y12 4Q	13 730	11 779.5	116.6	123.6	94.55	11 748.3	1.17	13 745.5
Y13 1Q02	9 065	12 386.6	73.2	67.8	106.92	12 504.6	0.72	9 003.3
Y14 2Q	13 366	13 162.1	101.5	101.6	99.30	13 248.1	1.01	13 380.1
Y15 3Q	15 148	13 614.5	111.3	104.4	103.79	13 980.0	1.08	15 098.4
Y16 4Q	16 410	14 167.7	115.8	123.6	90.31	14 701.2	1.12	16 465.4
Y17 1Q03	10 004	15 092.4	66.3	67.8	95.73	15 412.5	0.65	10 018.1
Y18 2Q	16 852	16 579.2	101.6	101.6	102.93	16 114.7	1.05	16 920.4
Y19 3Q	19 059	18 248.7	104.4	104.4	108.61	16 808.3	1.13	18 993.4
Y20 4Q	24 395	19 735.0	123.6	123.6	112.82	17 493.8	1.39	24 316.4
Y21 1Q04	15 375			67.8	124.79	18 171.9	0.85	15 446.1
Y22 2Q	23 371			101.6	122.08	18 842.8	1.24	23 365.1

$У_4 = C_1 * C_2 * У_3$

where C_1 - ratio of the unit turnover of small business enterprises to the unit turnover of small enterprises;

C_2 - ratio of the number of small business enterprises to the number of small enterprises which have reported;

$У_3$ - estimated turnover values;

$У_4$ - expected turnover.
