FOOD CONSUMPTION AS AN INDICATOR OF THE QUALITY OF LIFE OF THE POPULATION IN REGIONS

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Received February 07, 2016; Accepted in revised form March 20, 2016; Published June 27, 2016

Abstract: The quality of life, which is a complex characteristic of human existence, its level and conditions, in the research practice is measured by statistical and sociological methods. This characteristic reflects the degree of satisfaction with different needs and subjective perception of life and its individual aspects. In this work the statistical method is chosen to describe the quality of life. It aims to the indicators' analysis, which are connected with food consumption (using Kemerovo region since 2010 to 2014 as an example) and differentiated into two parts: standard of living and living conditions. The analyzed level (households' expenses share for food in overall consumer spending structure, food consumption structure, its nutrition and energy value) and conditions indicators (food prices, consumer price indexes, a minimum food set cost dynamics and its ratio with the average income, retail food trade turnover, its share in total turnover of the region, public catering turnover) have shown low life quality in the region in comparison with Russia in general, and also its decrease for the last one or two years, which is confirmed by traditional indicators of living standard and quality.

Keywords: quality of life, standard of living, living conditions, consumer behavior, food consumption, statistical analysis, indicators

DOI 10.21179/2308-4057-2016-1-171-180 *Foods and Raw Materials*, 2016, vol. 4, no. 1, pp. 171–180.

INTRODUCTION

The need for food is one of basic human needs, satisfaction of which provides his / her existence, allows to live, work; maintaining not only physical health, but also mental health. At the same time food is very different in different population groups (by quantity, assortment, and on content) and is capable in many ways to characterize some aspects of living standards. It is reported by researchers of food consumption problems [1–9].

Before showing position of food parameters in system of life quality criteria, it is necessary to define this concept, establish its internal filling and connection with other scientific categories of the corresponding subject field, and also specify approaches and methods of its measurement.

The category “living standard” and its empirical research are not deprived of scholars’ attention [10–25] in recent years, but complexity and diversity of this concept cause a rich spectrum of approaches to treat its content [for more details see 26]. In classical theories of life quality it is accepted to distinguish two main scientific directions: doctrines based on the objective living conditions analysis and social subjects developments; and concepts of the perceived life quality oriented to people's sensory perception of their lives and to subjective evaluation of existence parameters. However recently the offers to connect these two approaches, their rational complementarity with which it is necessary to agree sound more and more actively. In our opinion, life quality is a complex characteristic of people's vital activity level and conditions reflecting satisfaction degree of various needs and subjective life perception and its certain aspects.

Being guided by this determination, it is possible to distinguish two things: firstly, life quality combines the standard of living and living conditions; secondly, life reflects both objective and subjective characteristics of existence. The degree of material security of people allowing to satisfy their needs is offered to understand as living level. Living conditions are those circumstances which accompany a person (or society) in the course of his/her activity and promote satisfaction of various needs. Such option of life quality differentiation will remove all the disputes of scientists and practicians on a ratio of the concepts “quality of life” and “level of living”.

Distinguishing objective and subjective components in "life quality" leads not only to accounting the actual

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parameters of life and personal ideas of them, but also to determination of methodical approaches to its measurement. Statistics usually studies objective life quality indicators, and sociology is engaged in objective indicators mainly. Both statistical and sociological options of life quality research have their own advantages and disadvantages, and for effective connection in a general technique require serious additional scientific, financial, organizational and managerial efforts. Therefore modern researchers, as a rule, rely either on statistics, or on sociology. The statistical analysis of food consumption of the region population (on the example of the Kemerovo region), which reflect level and living conditions and consequently, qualities of life became the purpose of this research. As for the level, conditions, and quality of life scientists use a set of indicators from the most different spheres of human existence. There is a reasonable sense to allocate those which concentrate on one of the main aspects of quality of life reflecting foremost of people's need – need for food.

OBJECTS AND METHODS OF STUDY

The objects of research were food consumption parameters in Kemerovo region and their communication with indicators of life quality. For the analysis the period from 2010 to 2014 is taken. Official statistics data became the main information source, and the main research method is the statistical analysis. At the same time the comparative analysis was kept not only in dynamics by years, but also on a territorial sign (in comparison with Russian indicators got in the Siberian Federal District (SFD) through Kemerovo region municipalities), and also on structural filling of this or that characteristic and on population categories (structure of families, profitable groups); the indicators measured both in absolute and in relative units which often are more evident for comparison of data were used.

The main methodical approach which distinguishes authors methodology from others is indicators' division into two groups: reflecting the living conditions level and characterizing it. Describing living level indicators and then its conditions it is possible to analyze quality of life in general more fully and deeply, to gain more evident and capacious impression.

As in the main part of work indicators of food consumption by Kemerovo region inhabitants are considered, and attempt of determination of their interrelation with life quality is performed, it is necessary to briefly characterize key parameters of level and living conditions of the region population which provides the traditional statistics (Table 1). It will allow understanding information about object of research better.

Table 1. Several indicators of living level of Kemerovo region population [27, 28, 29, 30]

Indicators	2010	2011	2012	2013	2014
The number of resident population (for January 1 of the year following the reporting), one thousand people	2761.3	2750.8	2742.4	2734.1	2725.0
Average per capita cash incomes (in a month), rubles	15341	16666	18511	19697	19801
The actual owned cash incomes, in % to previous year	105.4	99.4	102.3	97.6	90.9
Average monthly nominal payment of organizations employees, rubles	18028	20479	23403	25326	26809
Real accrued payment, in % to previous year	106.1	105.1	108.1	100.5	98.1
The average size of the granted pensions (for January 1 of the year following the reporting), rubles	7570	8251	9139	10008	10891
The actual size of the granted pensions, in % by the corresponding period of the previous year	112.0	104.1	102.3	103.4	97.3
The size of the living wage (LW), on average per capita, rubles a month	4648	5263	5448	6829	7455
in % to previous year	108.1	113.2	103.5	125.3	109.2
The population proportion whose cash incomes is lower than LW, in % of the total number of the population	11.0	11.6	10.6	13.9	14.5
Ratio with living wage size, %					
average per capita cash incomes	330.1	316.7	339.8	288.4	265.6
average monthly nominal accrued payment	369.9	363.5	400.4	349.1	338.7
Coefficient of funds	14.6	14.1	14.9	13.8	12.2
For information only across Russia, in % to previous year:					
the real owned cash incomes of the population	105.9	100.5	104.6	104.0	99.3
the real accrued payment	105.2	102.8	108.4	104.8	101.2
the actual size of the granted pensions (in % by the corresponding period of previous year)	134.8	101.2	104.9	102.8	100.9
Ratio with the living wage size, %					
average per capita cash incomes	333.0	326.0	357.0	355.0	345.0
average monthly nominal accrued payment	341.0	340.0	378.0	381.0	376.0
The population proportion whose cash incomes is lower than LW, in % of the total number of the population	12.5	12.7	10.7	10.8	11.2
Coefficient of funds	16.6	16.1	16.4	16.3	16.0

The population of Kemerovo region on January 1, 2015 was 2725.0 thousand people, that is 1.3% less than for January 1, 2011. The number of people in the region decreases regularly from year to year. At the beginning of the analyzed period this tendency was caused by generally natural population decline, but in the last 3 years it was caused mainly by migration [27]. Average per capita cash incomes, average monthly salary, and also average size of the granted pensions in nominal terms gradually grew, but in real measurement the situation is the following: cash incomes had multidirectional dynamics, having reduced in 2014 directly by 9% in comparison with previous year; the salary and pensions grew until 2013, though with different intensity, but in 2014 were reduced almost by 2% and 3% respectively. It should be emphasized that on average in Russia the real accrued salaries and pensions did not decrease in 5 years, even in 2014; the real owned cash incomes decreased last year, but only by 0.7%.

The minimum subsistence level grew more intensively than the population income and salary (the first indicator increased by 60.4% from 2010 to 2014, the second one – by 29.1%, the third one – by 48.7%) that is visible also on the ratio of average per capita cash incomes with the MSL which decreased considerably in the last 3 years. By the way, this tendency is not so noticeable across Russia. The difficult situation with population income in Kemerovo region caused an increase in the number of those whose cash incomes are lower than the minimum subsistence level – from 11.0% in 2010 to 14.5% in 2014. In the Russian Federation this dynamics was different, and in 2014 it was 11.2%. However, in Siberian federal district the majority of regions are characterized by a bigger population share with cash incomes below MSL (only in Omsk region the indicator was 11.9% in 2014).

One more traditional indicator characterizing living standard is coefficient of funds. It shows the level of social stratification in society and is determined as a ratio between the average cash incomes levels of 10% of the population with the highest income and 10% of the population with the lowest income. The coefficient of funds in Kemerovo region in the analyzed period decreased reaching 12.2 in 2014, though in 2012 the general tendency of the indicator fall was broken. The all-Russian coefficient of funds was always higher than in Kuznetsk coal basin (Kuzbass), but it reached the minimum in 2014 too.

The data provided in table 1 characterize living standard in general. If speaking about conditions, the indicators quantity can increase many times. Therefore we will provide only some characteristics reflecting various living conditions of Kuzbass population. The most important of them (the complex one) is life expectancy. In Kemerovo region as in Russia in general, it gradually grew over the last 5 years and in 2014 constituted 67.8 years and 70.9 years respectively [28, pp. 67, 69]. The unemployment rate in Kemerovo region (general and registered) was reduced till 2013, but in 2014 there was a small growth (by 6.2% and 2.0% respectively). In the Russian Federation the tendency of unemployment reduction has remained till 2014 (5.2% and 1.2%) [28, p. 74]. The size of total housing area in Kuzbass is about 20 sq.m, but in Russia it is a bit larger – 21.4 sq.m [28, p. 103]. The number of pensioners on 1000 of people in Kemerovo region constitutes 314.7, which is also significantly higher than in the country (287.9 people) and it is the highest in Siberian federal district [28, p. 109]. The population morbidity calculated as number of the registered patients with the diagnosis established for the first time on 1000 people of the population in Kemerovo region in all years of the analyzed period was higher, than in the Russian Federation, constituting 865.4 in 2014 [28, p. 157]. The number of doctors on 10000 people in Kemerovo region in 2014 was 45.9, and in Russia – 48.5 [28, p. 181]. It is possible to characterize the education level by the number of people on 1000 at the age of 15 and older, having higher education. According to census of 2010, in Kemerovo region this indicator was 185, and in Russia – 234 [28, p. 89]. Thus, the majority of living conditions indicators in Kemerovo region is lower than in Russian and, unfortunately, in the last couple of years they tend to deteriorate.

RESULTS AND DISCUSSION

It is reasonable to start the analysis of the living level indicators related to food consumption with the corresponding consumer spending (Table 2) which in general are understood as the part of cash expenditures directed to consumer goods and services purchase (at full price regardless the purchase purpose, with exception of works of art, jewelry, antiques, building materials purchased as capital investments and investment works).

It clear from the Table 2 that the consumer spendings in Kemerovo region including food and soft drinks in ruble expression grow from year to year, however these indicators do not consider inflation processes. Nevertheless, it is possible to count that since 2010 to 2014 consumer spendings in general have grown by 37%, and food expenses by 41%, that demonstrates the decrease of living.

Relative values show a share of product costs in general and food expense structure. Throughout the analyzed period the account food and soft drinks part was about a third of the total amount of consumer spendings and had no unambiguous dynamics (it was minimum in 2013 and maximum in 2014). A Kuzbass dweller spent about 2% of the budget for soft drinks. The biggest amount – about 10% – was spent on meat. The average dweller spends a little more than 5% of consumer expenditure to bakery products and grain. The part of costs falling on dairy products, cheese and eggs is approximately the same. Further by descending follow fruit; sweets (sugar, jam, honey, chocolate, candies); vegetables; fish and seafood. Oil, fats, and other food are at the bottom of the list. Less than 1% of family money in each case is spent on these two groups. The expenditure for everything provided in the table of products category had no certain dynamics, and fluctuated within 5 years.

Table 2. Food and soft drinks as a part of consumer spending in Kemerovo region households [29, pp. 115–116]

Indicators	2010	2011	2012	2013	2014
Total consumer spending (on average on the household member a in a month; rubles)	7796.2	8761.8	9973.3	10328.1	10689.5
Including food and soft drinks	2554.5	2939.0	3182.2	3246.0	3605.6
Total consumer spending (%)	100.0	100.0	100.0	100.0	100.0
Including food and soft drinks	32.8	33.5	31.9	31.4	33.7
Of them: food	30.7	31.5	29.9	29.6	31.7
Including: bakery products and grain	5.4	5.4	4.7	5.2	5.4
meat	10.2	9.8	10.4	9.3	10.2
fish, seafood	1.7	1.9	2.0	1.8	2.1
dairy products, cheese and eggs	5.1	5.4	5.1	5.3	5.7
oils and fats	0.7	0.8	0.6	0.6	0.5
fruit	2.4	2.4	2.3	2.4	2.6
vegetables	2.0	2.0	1.8	2.0	2.2
sugar, jam, honey, chocolate and candies	2.3	2.9	2.2	2.2	2.1
other food	0.9	0.9	0.8	0.8	0.9
soft drinks	2.1	2.0	2.0	1.9	2.0

The comparison of data on different national groups showing differences in consumer behavior of people is important for the characteristic of level of living. So, the statistics fixes consumer households spending in city and rural districts (for example, in 2014 in Kemerovo region citizens spent 3595.7 rubles a month on one person on food and soft drinks, and in villagers they spent 3663.6 rubles. At the same time the share of expenses on purchase of food from city dwellers constitutes 31.7%, and at rural 53.7% that demonstrates very strong lagging of villagers on the level of material well-being from citizens) [30, p. 12]. Food expenses comparison in households with income levels is also evident (on 10 percent national groups). In 2014 in the first group (with the smallest owned resources) 43.2% of consumer spending were on food and soft drinks, and in the tenth (with the greatest income) it is almost twice less – 23.0% [29, pp. 118–119]. In expense structure lonely people and families with 5 and more people were singled out. They spent 46.3% and 41.3% respectively on foodstuff with an average of 36.9% in 2014 [29, p. 112].

Other cut of the comparative analysis is interterritorial which allows assessing a situation in the certain territorial subject of the federation in comparison with the next subject and with the average Russian level. So, the share of expenditure for food and soft drinks in the total amount of consumer spending in Kemerovo region in 2014 was 5.2% higher than on average in Russia, and 3.3% higher than on average in Siberian Federal District. Only in two regions of Siberian federal district (Omsk region and the republic of Tyva) this indicator is higher than in Kuzbass (35.4% and 35.2% respectively). The lowest indicators of expenses on food and drinks among regions of Siberian federal district are in Krasnoyarsky Krai (26.2%) and in Tomsk region (23.9%) [28, p. 85].

In general it is necessary to emphasize that the expenses share of families on livelihood in the lump of consumer spending is one of the most evident for the characteristic of living level and it is often used in the international comparisons. So, according to LLC Rating Agency in 2014 the average expenses share of families on food in the European countries constituted 22.6%. Traditionally in this rating Luxembourg (8.6%) is the leader; the indicator in 15 countries range from 10% to 15% (The Netherlands, Denmark, Great Britain, Switzerland, Norway, Austria, Ireland, Cyprus, Finland, Germany, etc.). Russia is 28th of 40 European countries with value of 27.7%. Ukraine is the last, and it is the unique country of Europe in which a share of expenditure for food has transshipped for a half of all consumer spending of families (55.5%) [http://riara-ting.ru/infografika/20150115/610643424.html]. In our opinion, the expenses share of households on acquisition of food is the most compact, informative and adequate indicator of population life quality from all indicators connected with food consumption.

The relevant data by separate product groups [see, for example, 31] give a substantial picture of food consumption in the region and their nutrition and energy value (Table 3).

The most important of the analyzed product set is milk and dairy products – average Kuzbass dweller in the analyzed period consumes at least 250 kg of them a year. Then come grain products (not much less than 100 kg) and meat and meat products (76–85 kg). Further we can see vegetables and melon; potatoes; fruit and berries. Sugar and confectionery, fish and fish products, oil and fats are least represented in a product basket. For 4 years more or less directed increasing consumption dynamics was shown by the following groups of goods: fruit and berries; meat and meat products; eggs; fish and fish products. The opposite dynamics is with vegetables, oil and other fats. The nutrition value analysis shows that the use of proteins increases from year to year and the quantity of fats and carbohydrates, as well as of the food energy value change not so unambiguously.

Table 3. Consumption, nutrition and energy value of food in households (in average on the member of a household) [29, p. 120]

Indicators	2010	2011	2012	2013	2014
Staple food consuming, kg a year:					
Grain products	98	96	91	94	94
Potatoes	71	72	65	59	62
Vegetables and melon	73	80	84	80	79
Fruit and berries	62	64	68	72	72
Meat and meat products	76	80	83	81	85
Milk and daity products	251	271	270	261	257
Eggs, pc.	217	217	219	225	232
Fish and seafood	17	19	21	21	21
Sugar and confectionery	27	30	28	29	28
Vegetable oil and other fats	13	12	12	11	11
Nutrition value, g. in days:					
Proteins	72	74	75	75	77
Fats	107	110	108	107	107
Carbohydrates	326	332	316	324	323
Energetic value, kcal a day	2562	2627	2543	2564	2575

It is interesting that villagers eat much more bakeries, potatoes and other vegetables than citizens, but less meat, fish, dairy products, sugar and confectionery. At the beginning of the analyzed period villagers consumed fewer eggs, than citizens, but in the last two years they were ahead of residential locations inhabitants. It is also noticed that those who live in the rural zone consume more carbohydrates in comparison with those who live in the cities; in the last two years villagers' food became more high-calorie [29, pp. 120–121]. On consumption amounts direct and rather strong impact is done by a family structure, in particular, existence of children. So, the statistics shows, that the more family is and the more children under 18 it has, the less members of a household consume products practically of all analyzed groups, the nutrition value and caloric content of food is lower (for example, in 2014 the energy value of the consumed products in families with 1 child under 16 years constituted 2367 kcal a day on 1 member of a household; in families with 2 children it was 1907 kcal a day; in families with 3 children – 1813). Consumption of food is growing considerably with family income, especially on such product groups as vegetables, fruit, meat, dairy and fish products [29, p. 124; 30, pp. 24–25].

Consumed food characteristics are reasonable to compare to rational regulations which are done by many researchers [5, pp. 32–34]. A.M. Geshonkov and E.Y. Merkulova have developed a technique, which could determine the compliance degree of food consumption in Russian regions with the existing standard parameters, and also divide all territorial subjects of the federation into three groups. Kemerovo region was placed to the second (average) group on the compliance level of the actual and rational consumption [6, p. 61]. One more cut of the analysis (territorial) shows that in Kemerovo region the food value is two elements (proteins and fats) higher, than on average in Russia and in Siberian federal district, and carbohydrates and energy value is lower, especially, in comparison with indicators of Siberian Federal District [28, p. 97].

As it was already marked above, there are indices of living conditions which add parameters of a living standard and in the amount with them characterize quality of life. It is necessary to carry indices of consumer prices to the indicators of living conditions connected to consuming of food (such as a consumer price index on foodstuff and their separate groups, and also on vendors of agricultural production; average consumer prices of separate types of foodstuff; the cost of the main food consumed in households; cost of the minimum set of food); indices of retail trade turnover by foodstuff; commodity structure of retail trade turnover; objects of retail trade and public catering; turn of public catering and some other. These characteristics reflect under what circumstances a consumer behavior appears and what infrastructure, price and other conditions provide it. We will study some of them and, first of all, consumer price indexes (Table 4).

In general the consumer price index shows change in time of an overall price level and rates for the goods and services purchased by the population for non-productive consumption by fixation of the set of goods and services cost relation in a current period to its cost in a previous period. On average for the analyzed period the consumer price index on goods and services in Russia has constituted 107.9% a year [28, p. 37], and on foodstuff – 109.4%. The highest consumer price indexes on foodstuff were in 2010 and, especially, in 2014, the lowest – in 2011. Siberian Federal District and Kemerovo region keep all-Russian tendencies, but it should be noted that in Kuzbass a consumer price index on foodstuff in all years (except for 2011) is a little bit higher than on average across Siberian federal district. So, in the last two years only Altai Krai and the Republic of Buryatia exceeded Kemerovo region on this indicator.

Table 4. Consumer price indexes on foodstuff [28, p. 38; 27, p. 268]

Indicators	2010	2011	2012	2013	2014
Russian Federation	112.9	103.9	107.5	107.3	115.4
Siberian Federal ditrict	111.3	105.0	108.2	106.9	114.7
Kemerovo region, including:	111.6	104.9	108.4	107.3	115.1
Meat products	106.5	105.3	109.0	101.2	120.1
Fish products	102.7	108.4	99.3	107.1	119.1
Oil and fats	132.7	102.9	104.9	109.7	104.6
Milk and dairy products	117.5	107.4	106.1	113.3	114.0
Cheese	116.1	99.7	100.2	122.2	113.6
Eggs	117.1	108.4	97.8	133.5	104.5
Sugar	120.8	74.0	104.4	105.5	143.4
Confectionary	105.3	111.4	107.3	106.6	111.1
Coffee, tea	104.3	111.5	104.3	102.7	107.0
Salt, sauces, spices, concentrates	103.6	108.4	106.0	105.7	106.1
Wheat flour	127.8	87.8	139.7	97.3	111.5
Bread and bakery products	103.1	120.8	113.2	109.0	108.1
Grain and bean	153.2	91.2	95.8	100.0	141.4
Pasta	104.5	102.9	109.0	103.8	108.1
Potatoes	198.2	47.2	194.4	85.2	106.5
Vegetables	166.2	66.2	115.9	109.4	120.4
Fruit and citrus	113.6	100.5	108.0	99.5	118.4

Dynamics of the regional prices of specific food was not very stable. In 2010 prices on potato grew almost twice; by 66% – on vegetables, by 53% – on grain and bean; by 33% – on oil and fats; by 28% – on wheat flour. There was no prices reduction in foodstuff groups. In 2011 potato, vegetables, sugar, flour, grain and bean prices fell significantly. And the largest prices increased on bread and bakery products. In 2012 the greatest surplus of the prices was again shown by potatoes (94%) and wheat flour (40%). There was reduction of prices too, but insignificant – on fish products, eggs, grain and bean. In 2013 the maximum dynamics was shown by the prices of eggs (34%) and cheese (22%), and some decrease was fixed on flour, fruit, citrus and, especially, on potatoes. In 2014 there was no prices reduction at all, and the largest growth was on sugar (43%), grain and bean (41%), vegetables and meat products (both 20%). It is necessary to emphasize that prices instability of many food groups depend on a price situation on agricultural producers who, in turn, are caused by production volumes. For example, potato prices fluctuate, first of all, because of its productivity which differs strongly by years.

Important concept of population's living level statistics is the minimum set of food (MSF) cost. MSF is determined for a year for men of working-age and it reflects interregional differentiation of consumer prices levels. To calculate it the minimum amounts of consumption in the Russian Federation are used. The minimum set of food includes: wheat flour (20 kg), peas and haricot (7.3 kg), millet (6 kg), bread and bakery products (115 kg), vermicelli (6 kg), potatoes (150 kg), onion (20 kg), cabbage (35 kg), carrots (35 kg), cucumbers (1.8 kg), apples (18.6 kg), sugar (20 kg), cookies (0.7 kg), caramel (0.7 kg), 1st category beef (15 kg), mutton (1.8 kg), pork (4 kg), hens (14 kg), herring salty, picklings and so forth (0.7 kg), frozen fish (14 kg), milk (110 l), sour cream (1.8 kg), butter (1.8 kg), low-fat cottage cheese (10 kg), firm sorts of cheese (2.5 kg), eggs (180 pieces), margarine (6 kg), sunflower oil (7 kg), salt (3.65 kg), black leaf tea (0.5 kg), black pepper (0.73 kg) [35, p. 163]. The MSF price is calculated for a month. At the end of 2014 in Kemerovo region it constituted 3127 rubles (Table 5).

For the analyzed period MSF cost in Kemerovo region grew by 35%, but at the beginning of the period it decreased a little, and then began to grow, especially intensively in 2012 and 2014. It is interesting that the tendency of MSF cost change doesn't match the appropriate tendency of a consumer price index by years. So, in 2011 and 2013 the consumer price index advanced indices of MSF cost change and in 2012 and 2014 it lagged behind [35, p. 82]. This 10% mismatch in 2011 and 2012 was especially strong. Therefore, the consumer price index can't adequately reflect dynamics of MSF cost change. Changes of the average per capita income of the population and cost of MSF were more close indices during the period since 2011 to 2013, however in 2014 the last index strongly "shot ahead" - for 20% [35, p. 82]. It was reflected in specific weight of MSF cost in the income of the population – in 2014 it grew almost by 2% in comparison with previous years.

Table 5. Minimum set of food cost (at the end of the year) [35, pp. 80, 81, 84]

Indicators	2010	2011	2012	2013	2014
MSF cost, rub.	2322.9	2237.0	2585.4	2721.3	3127.1
MSF cost change, %	-	96.3	115.6	105.3	114.9
Specific weight of MSF cost in population income of, %	-	10.1	10.0	10.1	11.9

The territorial cutoff of the analysis shows that MSF cost in Kemerovo region at the end of 2014 was lower than on average across Russia (3297.9 rubles a month), and lower than on average across Siberian federal district (3323.7 rub). Intraregional comparing of data on the largest cities of Kuzbass (Kemerovo, Novokuznetsk, Prokopyevsk) allows to state that MSF is more available to the population in Prokopyevsk (2977.5 rub), and is less available in Novokuznetsk (3253.0 rub) [35, p. 83].

In the modern conditions the major loading on food support of population belongs to trade. The main indexes of retail foodstuff trade turnover in comparison with nonfood products are given in Table 6.

Absolute values of retail trade turnover, including drinks, and tobacco products in per capita terms grow at foodstuff from year to year, but the relative (as a percentage to previous year) have multidirectional dynamics, however in recent years, especially, in 2014, abbreviation of volumes of commodity turnover was recorded. At the same time rather stable share of retail commodity turnover by foodstuff in a total amount of commodity turnover (46–47%) in 2014 grew directly by 2%. It means that in difficult economic conditions the population is stimulated to redistribute expenditures in favor of food. So, retail commodity turnover by nonfoods in 2014 was reduced not only in the relative, but also in absolute values, including per capita.

In commodity structure of retail commodity turnover in 2014 top products were: alcoholic beverages and beer (10.1%); meat and meat products (8.1%); dairy products (4.3%); confectionery (3.4%); tobacco products (2.7%); bread and bakery products (2.4%) [29, p. 130].

The status of retail trade is also characterized by a distribution network. As of the end of 2014 Kemerovo region had: 43 hypermarkets (the area of trading floors of 442912 sq.m), 623 supermarkets (417317 sq.m), 939 specialized grocery stores (53567 sq.m), 4320 minimarkets (369635 sq.m), 1760 pavilions (47902 sq.m), 1577 tents and booths [36, p. 6].

One more factor of population food support is operation of catering establishments [37]. The statistics offers rather evident system of the indexes reflecting functioning of a public catering (Table 7).

Public catering turnover in general and it increased from year to year per capita in terms of money, but some price dynamics is ambiguous: after the growth in 2011–2012 there was some increase of indexes. At the same time in the all-Russian turn of public catering Kuzbass occupies only 1.3–1.4%. Public catering turnover in Kemerovo region per capita is much lower than in Russia, for example, in 2014 – by 43%.

Statistical information allows us to evaluate the average lunch price in a canteen, cafe, bistro (except canteens in organizations) for one person. So, in 2011 a Kuzbass dweller paid about 170.07 rubles, in 2012 – 182.36 rubles, in 2013 – 195.25 rubles, and in 2014 – 213.45 rubles. Note that the growth of lunch price was carried out by slower rates than consumer foodstuff prices, especially in 2014 – by 9.3% and 15.1% respectively [35, p. 71].

Table 6. Retail trade turnover of foodstuff, including drinks, tobacco products and nonfoods (in valid prices) [27, p. 210]

Indicators	2010	2011	2012	2013	2014
	Millions of rubles				
Foodstuff, including drinks, and tobacco products	120200	136067	148429	161135	163138
nonfoods	138777	151212	169319	183707	171954
	As a percentage to the total				
Foodstuff, including drinks, and tobacco products	46.4	47.4	46.7	46.7	48.7
nonfoods	53.6	52.6	53.3	53.3	51.3
	As a percentage to previous year				
Foodstuff, including drinks, and tobacco products	96.8	102.9	103.4	99.5	91.6
nonfoods	112.1	102.8	104.8	102.9	89.1
	Per capita, rubles				
Foodstuff, including drinks, and tobacco products	43439	49370	54040	58846	59767
nonfoods	50152	54866	61646	67089	62998

Table 7. Public catering turnover (in valid prices) [27, p. 212]

Indicators	2010	2011	2012	2013	2014
Public catering turnover:					
Million rubles	10250	11802	14385	15553	16327
Per capita, rubles	3704	4282	5237	5680	5982
As a percentage to previous year (in the comparable prices)	86.1	106.7	115.4	98.5	99.0
Specific weight in a turn of public catering across Russia, %	1.3	1.3	1.4	1.4	1.3
For information: only across Russia					
Per capita, rubles	5470	6320	7120	7885	8570
As a percentage to previous year (in the comparable prices)	103.0	106.3	106.9	104.0	101.6

Functioning indexes comparison of public catering on municipalities allows us to range the them according to their share in the regional turnover volume of public catering. The biggest cities of Kemerovo region were on top: Kemerovo (32.4%), Novokuznetsk (28.6%), Prokopyevsk (7.1%). Less than a percent in a total turnover of public catering of the region is occupied Berezovsky, Kaltansky, Krasnobrodsky, Myskovsky, Osinnikovsky, Polysayevsky and Tayginsky districts and almost all municipal regions (except for Kemerovsky, Novokuznetsky and Tashtagolsky) own less than one percent in a total turnover of the regional public catering. If we take public catering turnover indexes per capita, we can see something different: Novokuznetsky municipal region (181% of regional average level), Tashtagolsky (163%) and Kemerovsky city districts (162%), Novokuznetsky city district (142%), Mezhdurechensky city district (103%) get head. In the remaining municipalities indexes are lower than regional average value [38, p. 157].

To complete the description of the Kuzbass public catering we would like to say that at the end of 2014 Kemerovo region had 601 public bistros for 15285 people, 1128 canteens of educational institutions, organizations and industrial enterprises for 90880 people, 1386 restaurants, café and bars for 62043 people [36, p. 6].

CONCLUSION

The statistical data analysis on a living standard of the population, consumer behavior and accompanying conditions in Kemerovo region will allow revealing some facts and regularities. So, real income indexes of the Kuzbass population in 2014 were reduced in comparison with prior year, the living wage value and the poverty level grew, and more intensively than in average in Russia. However the differentiation level of the population by the income level decreased and remained lower than all-Russian. Many living conditions are less favorable than in average in the country. It is reflected in life expectancy indexes (though it grew steadily during the analyzed 5-year period), unemployment rate, general living space security, proportion of pensioners in the total number of the population, morbidity and other indicators.

Food consuming data also confirm lowering of living standard and deterioration in living conditions: the share of food-buying expenses grew by 41% from 2010 to 2014 whereas consumer expenses in general – by 37%; for the last year the foodstuff expenditures share of households increased. It is especially high among lonely people, large families, villagers and the population with the lowest income. At the same time the share of expenditure for foodstuff in Kuzbass is higher, than on average across Russia and across Siberian federal district. Dairy products, bakery and meat products prevail in the structure of the consumed food in the area. In recent years people from Kuzbass began to consume more fruit and berries, meat, eggs, fish, and less butter and other fats. An unambiguous tendency is tracked: the larger the family, the less products are eaten in households counting on one person and the lower the nutrition and energetic value of products. In general Kemerovo region is the region with the average compliance level of the actual and recommended consuming of food.

During the analyzed period food prices were growing permanently in Kemerovo region, and, as a rule, by higher rates, than on average across Siberian federal district. But prices dynamics of the specific commodity groups wasn't stable, especially, of potatoes, vegetables, sugar, flour, grain and bean. The minimum set of food cost in Kemerovo region grew by 35% in last 5 years, but it remained below the similar index in Russia and Siberian federal district. The MSF cost made one tenth of average per capita income, and in 2014 grew to 12%. However this indicator isn't proportional to a consumer price index in general, therefore it can't precisely reflect the life quality of the population.

The reduction of retail foodstuff trade turnover in the last two years (in percents to previous year) and simultaneous increase of foodstuff share in a total amount of retail trade confirm the decrease in life quality. The population is to redistribute family means in favor of food, reducing the consumption level at the same time. Trade organizations network in Kemerovo region is rather developed, what cannot be said about catering companies (except for the two largest cities Kemerovo and Novokuznetsk). Regional catering turnover per capita is much lower, than on average in Russia, and its increase cannot be provided even by lower growth rates of lunch prices in canteens and cafes in comparison with foodstuff prices dynamics in general.

Thus, the statistics connected to consumer behavior of the population concerning food is the most important characteristics of level and conditions of its existence, and it is capable to adequately show life quality, even in the absence of other data.

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Please cite this article in press as: Morozova E.A., Glushakova O.V., and Fadeikina N.V. Food consumption as an indicator of the quality of life of the population in regions. *Foods and Raw Materials,* 2016, vol. 4, no. 1, pp. 171–180. doi: 10.21179/2308-4057-2016-1-171-180.