

Healthy life style and buying behaviour in the Czech Republic

Zdravý životní styl a nákupní chování v České republice

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Abstract: The authors analyze and interpret the data of the Czech Statistical Office about the consumption of the selected foods in the form of secondary analysis. The effort was to take into account the assessment of the trends as well as to deduce their possible impact on the health condition of an individual. From the analyses mentioned, it is obvious that in the selected statistical data of the development of food and beverages consumption in the Czech Republic the tendencies towards healthy life style have not been unambiguous or significant within the last eight years.

Key words: health, healthy life style, food consumption, beverages consumption, cigarettes consumption, civilization diseases

Abstrakt: Autoři analyzovali informace Českého statistického úřadu o spotřebě vybraných druhů potravin, nápojů a cigaret formou sekundární analýzy. Snahou bylo posoudit trendy spotřeby i jejich možné dopady na zdravotní stav jednotlivce a zároveň také porovnat spotřební chování v České republice se situací v EU. Z uvedených analýz je patrné, že ve vybraných statistických údajích vývoje spotřeby potravin, nápojů a cigaret v České republice za posledních osm let, resp. od roku 1990 nejsou tendence ke zdravému životnímu stylu jednoznačné a hlavně nijak výrazné. Ve vztahu ke zdravému životnímu stylu u nás tedy existuje rozpor mezi deklarovanou preferencí této hodnoty, jak o tom svědčí výsledky výzkumů Sociologického ústavu Akademie věd ČR, a údaji Českého statistického úřadu o reálném chování našich spotřebitelů. Jsou oblasti, jako spotřeba nealkoholických nápojů a masa, v nichž se projevují změny k lepšímu. Ve velké většině sledovaných oblastí (alkoholické nápoje, ovoce a zelenina, jedlé oleje, ryby) nejsou tyto tendence nijak patrné a jednoznačné. Alarmující je rostoucí spotřeba cigaret.

Klíčová slova: zdraví, zdravý životní styl, spotřeba potravin, spotřeba nápojů, spotřeba cigaret, civilizační nemoci

In connection with the previous article (Foret 2005, 2006), we focus on the issue of *healthy life style* this time and mainly on the fact if and how it is presented in the current shopping behaviour of the consumers in the Czech Republic. As empirical basis we will above all use data from the Czech Statistical Office, the Eurostat, the Ministry of Health of the Czech Republic, and medical and also economic studies dealing with the influence of the monitored foods on the health of an individual (Serenčěš, Rajčániová 2007) and (Živělová, Jánský 2007).

The dual perspective on statistical data observes new trends and also their possible health impacts on a consumer. Thus it enables to monitor the particular features of the so-called healthy life style in Czech population and also to compare our consumer behaviour with the situation in the EU (Health and Food 2006). National differences in the life style are described in the literature (Světlík 2003).

Health and healthy life style have belonged to the most preferred lifestyle values in our country in the long term period (Černý 1999). According to an ex-

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tensive representative research focused on life changes of Czech residents (it was realised in 1999 with the sample of 4 774 respondents at the age between 18 and 69), the healthy life style is the second most preferred one, just after the life style with family and for family. From these findings, it is obvious that almost two thirds of our inhabitants prefer healthy life style. In particular, 15% of them stated that they absolutely agree with healthy life style, and 50% that they rather agree. 70% of women are for healthy life style as well as 71% of people with university education.

However, this poses the question *to which extent the words correspond with changes in people's behaviour?* In the given report, we will try to compare the given verbal preferences (soft data) of healthy life style with statistical hard data about the real consumption behaviour of our inhabitants. We will analyse the accessible empirical data about the *everyday consumption of food, beverages and cigarettes*, about current state and up-to-date changes of this consumption, about the fact if and how *eating habits* are changing in the Czech Republic, and mainly about the fact how obvious are tendencies towards the state which could be considered healthy life style.

The results introduced in the contribution are a part of the research plan, id. code VZ: 62156 48904 "Czech economy in processes of integration and globalisation and the development of agrarian sector and sector of services in new conditions of European integrated market", realised with the financial support from the state budget through the Ministry of Education, Youth and Sports.

MATERIAL AND METHODS

From the accessible data of the Czech Statistical Office, the latest indicators for the past eight years

(or actually indicators since 1990) were chosen about the consumption of:

1. beverages,
2. milk and dairy products,
3. fruit and vegetables,
4. cooking oil,
5. meat and fish,
6. cigarettes.

These are indicators of the average consumption per one inhabitant of our country per year expressed in the relevant units (litres, kilograms, pieces). The main criterion for the choice of indicators of six chosen areas was the possibility of relatively unambiguous evaluation of the fact if the monitored consumption tends towards what can be considered healthy life style, it means if it is beneficial for our health or not from this point of view. We will gradually analyse and assess them in the following paragraphs.

RESULTS

Consumption of beverages

There is indisputably a positive trend in the area of beverages, because within the monitored eight years (1998–2005) *the consumption of soft beverages exceeded the consumption of alcoholic beverages*. Out of the total average consumption of 469 litres of beverages in 2005 per one inhabitant of the Czech Republic, the soft beverages were represented by 60%. During the last eight years, the average consumption of soft beverages per one inhabitant almost doubled – from 158 litres in 1998 to 281 litres in 2005. A significantly rapid growth can be seen in purchasing mineral water which represents 23% of the total volume of soft beverages. The average consumption

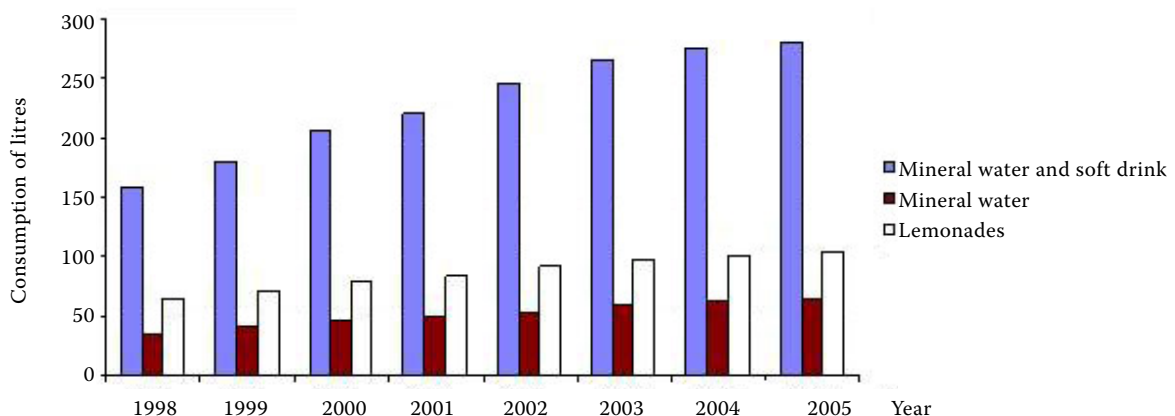


Figure 1. The consumption of soft beverages

of mineral water almost doubled – in 1998 a Czech consumer drank in average 35 litres, whilst in 2005 it was 64 litres. A significant growth is also visible in case of flavoured soda-water, its average consumption had increased from 65 litres in 1998 to 104 litres in 2005. Different kinds of flavoured soda-water represent 37% of the total consumption of soft beverages in the Czech Republic.

The increased consumption of soft drinks might signal the mistrust of consumers in the quality of tap water, but also a preference in wider range of flavoured soda-water and flavoured mineral water drinks with more attractive taste. However, the increased consumption of flavoured soda-water might lead to increased income of saccharose (cane sugar) which might together with the decreased physical activities result in obesity. Most producers supply flavoured soda-water with lower content of sugar, and thus they are trying to contribute to consumers' healthy life style (Figure 1).

In comparison with the consumption of soft beverages, the annual *consumption of alcoholic beverages remained almost unchanged, and reaches 188 litres per each inhabitant of the Czech Republic* which is by 75 litres more than the average consumption in the European Union countries. The average consumption of beer where we rank the first place in the world represents 87% of total consumption of all alcoholic beverages. The volume of the average consumption of beer (164 litres per person in 2005) in almost ten times as high as the average consumption of wine (16.8 litres per person in the same year) (Figure 2).

Beer contains energetically rich carbohydrates which can contribute to obesity. In 1990s, the executed studies proved increased mortality caused by heart attacks in regions where the consumers preferred beer and fat foods contrary to regions where the population consumed wine and vegetable dishes.

The consumption of alcoholic beverages in the Czech Republic does not show any positive trends towards healthy life style yet.

Consumption of basic foods

The development of index of basic foods' consumption has shown a positive trend mainly in a significant (up to 40%) growth of vegetables and fruits consumption since 1990. In other areas (cereals, meat, dairy products, oil and fats), there has been a drop of consumption since 1990 which was undoubtedly also caused by a significant, very frequently multiple increase of their retail prices. The fact that the Czech Statistical Office includes consumption of oils and fats into one group is not really suitable for the analysis of healthy life style, because whilst fats have a high energetic value and thus might contribute to the emergence of obesity, oils on the contrary contain a lot of nutriment beneficial to the body. That is why we are going to analyse the consumption of oils separately in the next part of the text.

Consumption of cooking oil

Only a small and unstable growth in the average consumption of cooking oil was discovered in our country in the past eight years (Figure 3).

The consumption of cooking oil reached only 9.3 litres in 2005. In the EU, the annual average is significantly higher – 21.5 litres.

The group of cooking oil includes both favourably functioning olive oil as well as a relatively less favourable sunflower oil. Sunflower oil decreases the value of the so-called LDL = lipoproteins which "supply" cholesterol into cells, but in a bigger amount, it also

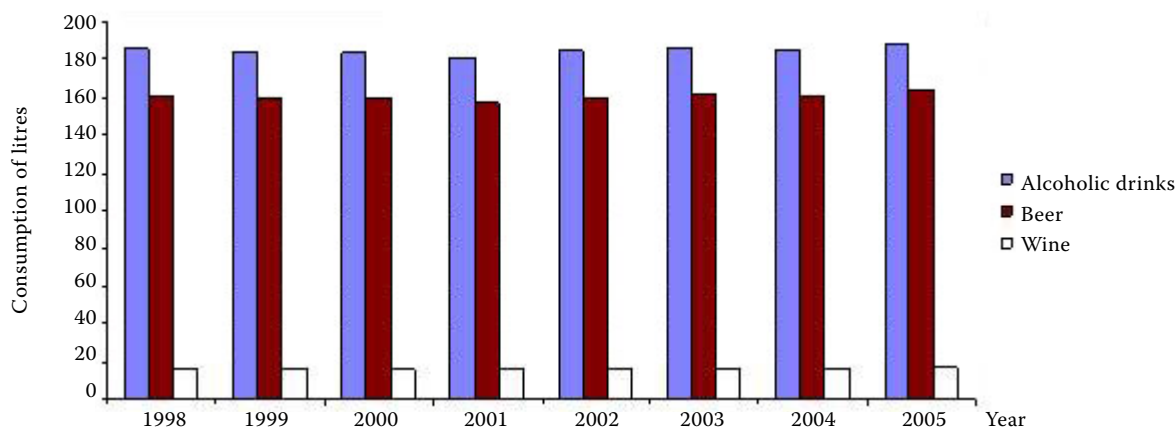


Figure 2. The consumption of alcoholic beverages

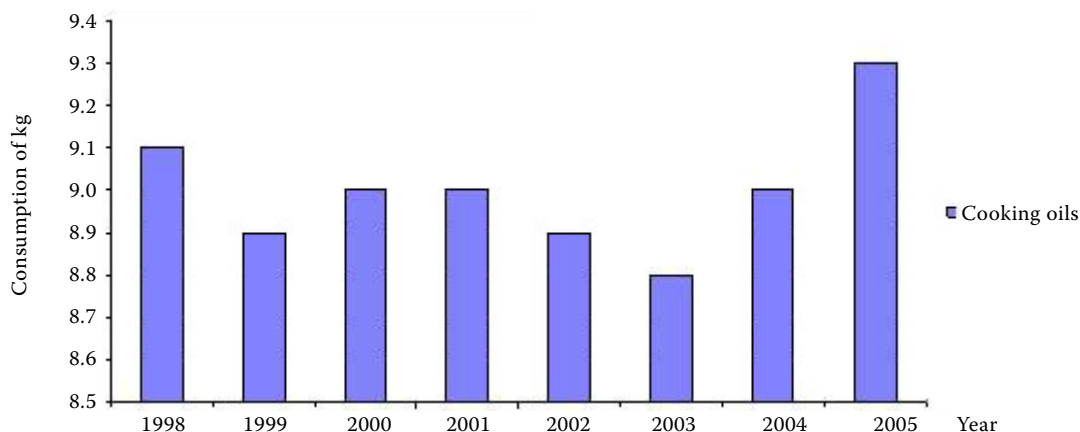


Figure 3. The consumption of cooking oil

decreases HDL = lipoproteins which “carry away” cholesterol from cells. On the contrary, olive oil decreases LDL and increases HDL (FAO 1994).

Consumption of fruit and vegetables

During the last eight years, the consumption of fruit went up moderately, whilst the average consumption of vegetables went slightly down (Figure 4). The volume of the average consumption of fruit is in fact equal with the average consumption of vegetables – it ranges around 80 kg. However, the average annual consumption of the EU inhabitants is significantly higher – 126 kg of vegetables and 114 kg of fruit per person.

Vegetables and fruit belong to low-energetic food. Eating habits which lead to the increased consumption of vegetables and fruit mean a lower energetic income and thus a lower risk of obesity. Obesity has a lot of complications, be it a higher blood pressure, the emergence of diabetes or the damage of hip or knee joints by the degenerative process.

The increased income of vegetables leads to a faster evacuation of bowels. The difficult and slow evacuation of bowels is a risk factor for the emergence of intestinal diverticulosis and tumorous diseases of bowels (CINDI dietary guide 2000).

If we compare statistical data from 1999 with 2003 issued by the Ministry of Health concerning reports about large intestine tumours, we find out that there was an increase by 12% (Zdravotnická ročenka 2006).

There are some reserves in the tendencies towards healthy life style considering the average consumption of fruit and vegetables in our country.

Long-term trends in consumption of fruit and vegetables show that the consumption of legumes is stagnating which is unfavourable mainly because bowels are loaded with food with a lower content of indigestible remains. This leads to constipation and consequently to the danger of intestinal diverticulosis and haemorrhoids.

However, we also noticed positive tendencies in the growth of fruit consumption, above all tropical

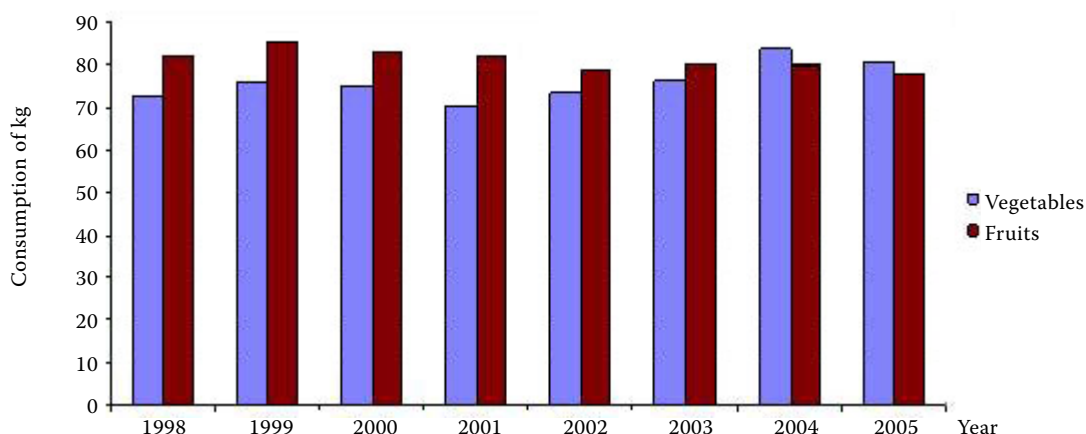


Figure 4. The consumption of fruit and vegetable

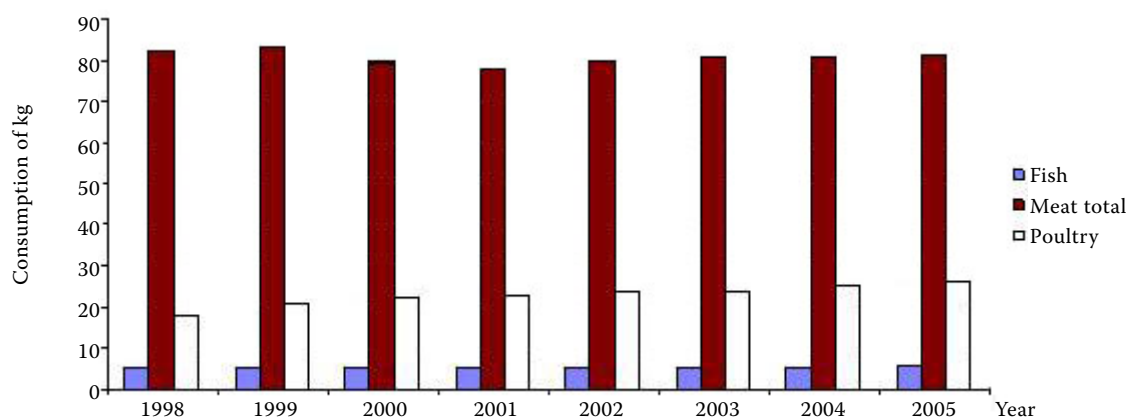


Figure 5. The consumption of meat and fish

fruit. The reason can be very simple. Tropical fruit has an attractive taste for consumers, and its price became more acceptable for consumers after entering the European Union. Considering the influence of health, fruit and vegetables have a rather positive influence whether we talk about content of vitamins, light resource of energy – fructose or the content of indigestible remains in our diet.

Consumption of meat and fish

Certain positive changes are obvious also in the consumption of meat and fish with a slightly unstable total average consumption of meat. A significant growth can be seen in the case of poultry – from almost 18 kg in 1998 to 26 kg in 2005. In contrast with this, a moderate growth of fish consumption is almost insignificant, its average value in 2005 did not even reach 6 kg, whilst in the EU the average annual consumption per one inhabitant is over 26 kg (Figure 5).

The annual average value of meat consumption does not change much in the Czech Republic – it ranges around 80 kg per person, and it is coming close to the level in the EU where it is 9 kg. A positive feature is a significant growth of poultry consumption to the exclusion of pork and mainly beef whose consumption is decreasing in our country. Unfortunately, fish consumption is growing only insignificantly.

There is a significant drop in the consumption of beef which is caused not only by high retail price, but also by fear of catching the mad cow disease. On the contrary, the growth in the consumption of poultry is positive from the viewpoint of healthy life style, because this meat contains less fat than pork. A lower intake of fat reduces the risk of obesity emergence.

From the viewpoint of lowering the risk of ischemic heart disease, it would be convenient to increase the fish consumption. Fish oil contains the unsaturated fatty acids which increase the value of the so-called HDL and decrease the value of the so-called LDL (FAO 1994).

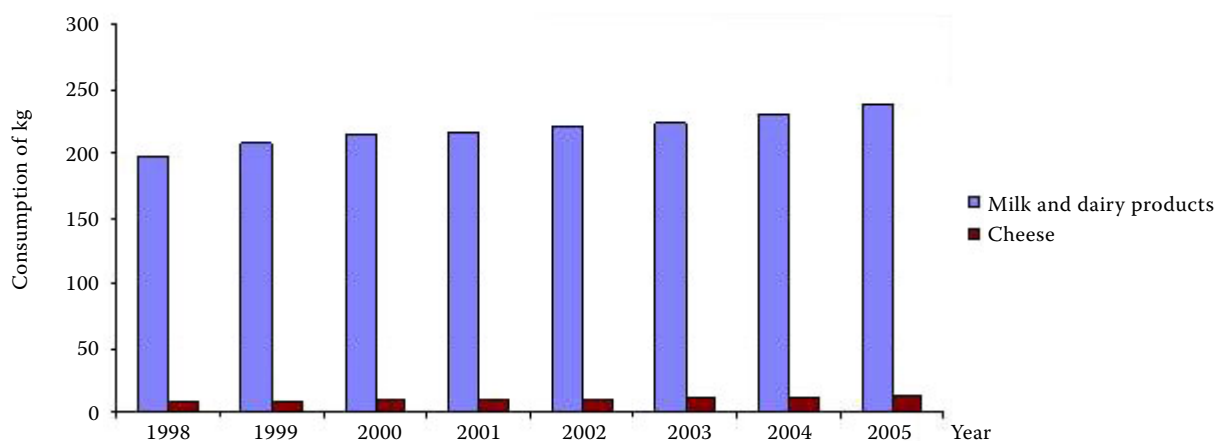


Figure 6. The consumption of milk and dairy products

Consumption of milk and dairy products

Considering the intake of saturated fatty acids, the growth in the average consumption of milk and dairy products, mainly cheese, is not too favourable. The average consumption of milk and dairy products went up during the given eight years from 197 kg in 1998 to 238 kg in 2005, in case of cheese the number went up almost by a half – from almost 9 kg in 1998 to almost 13 kg in 2005 (Figure 6).

Similarly as in the previous case of meat consumption, also our annual average consumption of milk and dairy products is reaching the level of the EU where it is 246 kg per person.

Considering the intake of fatty acids, milk and dairy products have not got such a positive influence on health of a human in comparison with vegetable oil. Dairy products such as butter, cream and cheese contain unsaturated fatty acids which increase LDL and increase the risk of emergence of thrombosis (bunching thrombocytes in small arteries) (John 1997).

Low-fat yoghurts have a special place among dairy products. They have lower content of unsaturated fatty acids and on the contrary they contain bifid bacteria favourable for the intestinal flora.

We can see a positive trend in the growth of consumption of natural cheese and drop in the consumption of processed cheese. Natural cheese has a lower content of fats and a higher content of the so-called essential fatty acids which are the cornerstone for creating proteins. On top of that, the processed cheese is considered by specialists to be our Czech abnormality, something practically unknown and uninteresting in the European cheese countries.

Consumption of cigarettes

The growth in the average consumption of cigarettes can be seen as a univocally negative trend.

The average consumption of cigarettes rose from 1 852 pieces in 1998 to 2 275 pieces in 2005 in our country (Figure 7).

A causal relationship between smoking and respiratory diseases of the upper airways has been proven by many clinical studies. The influence of smoking on the increased occurrence of lungs cancer is very well known also to the general public these days. If we compare the statistical data of the Ministry of Health of the Czech Republic about reporting tumours in lower airways, we can see a growth by 4% between the years 1999 and 2003 (Zdravotnická ročenka 2005).

CONCLUSION

From the given analyses, it is obvious that *in the chosen statistical data about the development in consumption of food, beverages and cigarettes in the Czech Republic during the last eight years, resp. since 1990, the tendencies towards healthy life style are not unambiguous and above all they are not significant at all.* There is certainly a great difference between the stated preference of this value as we can see it in the results of researches made by the Sociological Institute of the Academy of Sciences of the Czech Republic (Černý 1999), and the data of the Czech Statistical Office about the real behaviour of our consumers.

There are areas, such as the consumption of soft beverages and meat, where we can see changes for

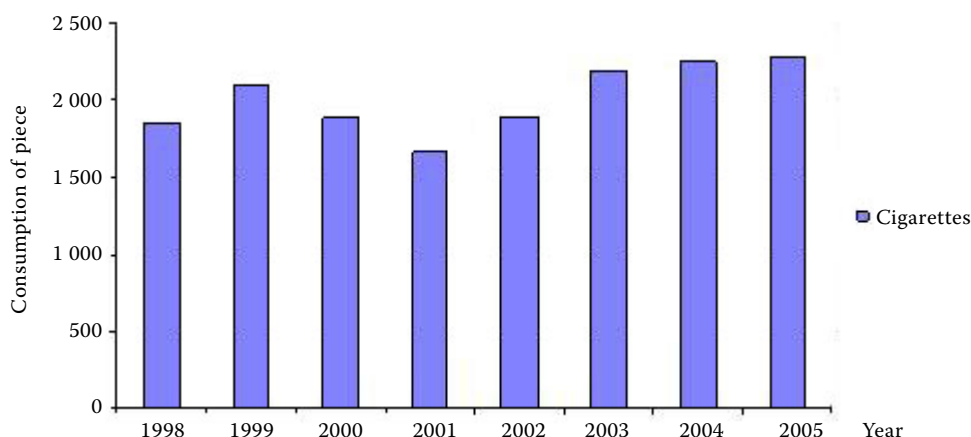


Figure 7. The consumption of cigarettes

the better. In most of the monitored areas (alcoholic beverages, fruit and vegetables, cooking oil, fish), however, these tendencies are not at all significant and univocal. What is alarming is the growing consumption of cigarettes.

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