PERSPECTIVE OF SUSTAINABLE FOOD CONSUMPTION IN LATVIA

Skaidrīte Dzene, **Aija Eglīte**
Latvia University of Agriculture
e-mail: skaidrite.dzene@gmail.com

Abstract
Food consumption becomes an increasingly important topic considering global and local environmental problems as well as health issues and wellbeing of nations in general. Also in Latvia people are becoming more aware of importance of food and its direct and indirect impact on their everyday life. Therefore it is very important to evaluate sustainable aspects of food consumption and look for the barriers and drivers in order to form more sustainable consumption patterns which are based on information, knowledge and consciousness. The aim of the study is to investigate the perspective of sustainable food consumption in Latvia. The tasks of the study are:
1. to review present food consumption patterns from sustainability perspective;
2. to elucidate consumers' understandings, attitudes and behaviour towards sustainable food consumption.

The empirical research was based on the online survey with a sample of 82 women in the age group from 19-35. Descriptive statistics were used to analyze the results of the questionnaire and data obtained from Central Statistical Bureau of Latvia. The results of the study indicate the gap between positive attitudes towards sustainable food and stated purchasing behaviour. There is an obvious perspective of growth of sustainable food market if we increase the awareness of consumers regarding sustainable consumption issues.
Key words: sustainable, food, consumption, behaviour, attitudes.

Introduction

Since food belongs to the very basic needs of all living beings and is the most essential product for daily consumption worldwide, it is clearly the basics of sustainable development. Sustainable food consumption should be on the top of every national political agenda, which is striving to secure wellbeing of their nation.

According to the calculations of total carbon footprints in Latvia, food constitutes approximately 55% of households' greenhouse gas emissions (GHG) Brizga and Kudriņickis (2009), composing the largest share is composed of animal products of high carbon capacity. Moreover food endangers not only the carrying capacity of the earth but human health as well.

There is no common definition or internationally accepted criteria system for sustainability of food. Most definitions mention three dimensions of sustainability: social sustainability (i.e. people issues, such as health, food safety, quality of life and hunger), environmental sustainability (i.e. land use, energy use and gas emissions and soil pollution) and economic sustainability. One cannot speak about food sustainability without evoking a sustainable agriculture (a way of producing food and feed that is healthy for consumers and animals, does not harm the environment, is humane for workers, respects animals, provides fair wages to farmers and supports and enhances rural communities), and sustainable nutrition, defined through the following aspects: enjoyable and easily digestible foods, preferably plant-based foods, preferably minimally processed foods, organically produced foods, regional and seasonal products, products with environmentally sound packaging, and fair-trade products Lefin (2008).

As Tischner and Kjaernes (2007) underline it: 'The goal cannot be to reduce consumption of food as much as possible, but to figure out which kinds of food, produced and processed where and in what way, prepared, how and by whom, consumed, digested, with leftovers disposed off or even reused in etc. are the most sustainable options for different regions and cultures, different production systems and consumers/ citizens.'

The aim of the study is to investigate the perspective of sustainable food consumption in Latvia.

To attain the aim the following tasks are identified as relevant:

1. to review present food consumption patterns from sustainability perspective;
2. to analyze the results of survey about consumers' understandings, attitudes and behaviour towards sustainable food consumption.

The empirical research was based on the online survey with a sample of 82 women in the age group 19-35. Descriptive statistics were used to analyze the results of the questionnaire and data obtained from Central Statistical Bureau of Latvia. The methods of analysis, synthesis and logical construction were used to study the problem elements.

Materials and Methods

To draw the perspectives of sustainable food consumption in Latvia, attitudes and behaviours towards sustainable food consumption were linked together to find out the extent to which attitude is translated into purchasing behaviour. To get an insight into this the study focused on three aspects:

- how important the issue is for the consumer;
- does the consumer actively seek the more sustainable produce;

- the purchases of products identified as being more sustainable (obtained from official statistics).

To obtain the answers on two first questions mentioned above, an online survey was designed and conducted in March 2012. To measure attitudes and opinions the questionnaire was mainly containing Likert-type scales, which assumes that the strength/ intensity of experience is linear, i.e. on a continuum from strongly agree to strongly disagree, and makes the assumption that attitudes can be measured. Respondents were offered a choice of five pre-coded responses with the neutral point being 'I do not know' or 'have no opinion'.

The Likert Scale was also used to allow the individual to express the degree of their agreement or disagreement with a particular statement.

The sample for this study consisted of 82 young consumers - women in the age group from 19 to 35 years. The rationale for focusing on this population is twofold. Firstly, the women are the ones who are mainly shopping for food and serving it to their families. Secondly, the young age is chosen because this is the time, when women establish families and form their own values and attitudes towards joint consumption.

Descriptive statistics were used to analyze the results of the questionnaire and data obtained from Central Statistical Bureau. The methods of analysis, synthesis and logical construction were used to study the problem elements.

Results and Discussion

Sustainable consumption is based on a decision-making process that takes the consumer's social responsibility into account in addition to individual needs and wants. Everyday consumption practices are still heavily driven by convenience, habit, value for money, personal health concerns, hedonism, and individual responses to social and institutional norms and, most importantly, they are likely to be resistant to change.

Even though there is the evidence of growing share of ethical consumers, who are feeling responsible towards society and environment and expressing these feelings by means of their purchase behaviour, practice shows that initiatives like sustainable organic food, products free from child labour, and fair-trade products often have market shares of less than 1% Vermeir and Verbeke (2005). This is at least partly due to the attitude-behaviour gap: attitudes alone are often a poor predictor of behavioural intention or marketplace behaviour (Kraus, 1995; Ajzen, 2001).

Potential explanations are that price, quality, convenience, and brand familiarity are still the most important decision criteria (Carrigan and Attalla, 2001; Weatherell et al., 2003), while ethical factors are only effectively taken into account by a minority of consumers. This was also proved in this particular study, where 64% of respondents stated to buy the products of their favourite brand.

Hence, although consumer interest in sustainable products may be growing, sustainable food markets remain niche markets, attracting consumers with a specific profile.

A positive attitude towards sustainable products is a good starting point to stimulate sustainable consumption. Several studies concentrated on attitudes towards sustainability and sustainable consumption behaviour. In general, about 30% of the consumers have a positive attitude towards sustainable consumption These consumers claim to pay attention to ecological packaging, the origin of the food products and regularly buy sustainable organic food products. They perceive sustainable products to be better with respect to taste, quality, safety, and freshness, and to be more beneficial with respect to human health, the environment, and regional economies. A more negative attitude is found for the attributes price, appearance, convenience, and conservation. However, although people may have a positive attitude, they are largely passive in their role as consumer when it comes to supporting environmental or animal welfare improvements with their available budget (Vermeir and Verbeke, 2005).

The particular study is based on the following criteria's of sustainable food consumption:

- locally and seasonally produced food, thus reducing the consumption of energy and food miles, while storing the products and delivering to consumers;
- ecologically produced food, which includes animal welfare, biological diversity, food and the environment free from pollution of agricultural chemicals;
- reduced meat consumption, thus reducing CO_2 emissions and negative impact on the environment;
- fair trade products, which includes social fairness and care about the environment;
- reduced food waste.

All these criteria's were used to design the questionnaire in order to understand consumers' opinion, attitudes and behaviour towards sustainable food consumption.

In Table 1 the results of the questionnaire, where consumers indicate their attitudes and state their actual behaviour towards sustainable food consumption issues are shown. All aspects were rated as important by high levels of consumers but there were differences. Healthy balanced diet was rated the highest with 90% classing it as important, while the waste (37%) and

animal welfare (54%) were rated the lowest.

Most of the consumers claimed that they buy sustainable food, especially locally (52%) and in season (47%) produced vegetables and fruits as well as healthy food (56%) and production with high animal welfare standards (43%), but not as much as they would prefer to. Much smaller number of respondents replied that they really buy the food with indicated sustainability criteria. Especially low purchasing level was found for fair trade (6%) and animal welfare products (11%). It is mainly related to low understanding and information about these products as well as availability. 58% of respondents answered that they do not know anything about fair trade products, and 36% stated they have got some information, which is not enough to make an intentional choice. To make the fair trade concept more familiar the questions about products were restricted to tea and coffee, which are the main available choices in shops, but results show that it did not help to identify the concept.

Regarding animal welfare, 72% respondents replied that they have no idea how to recognize if the products (meat, eggs and milk) are produced considering animal welfare standards or not.

These numbers present an obvious gap between attitude and behaviour. Apart from the explanations about culture, values, needs and motivation, these results can be mainly interpreted with insufficient knowledge, information and availability of sustainable food products.

The results show obvious potential and perspective of sustainable food market. If consumers received more information and education regarding sustainable consumption issues, it would progress in higher sales of sustainable food products with one objection – the price should not be much higher than that of convenience food. In this study the effect of the price is not researched in details, but most of previous studies indicate its strong impact on decision to choose sustainable food products. However, only 22% of respondents stated that they look for cheapest products while shopping for food.

To emphasize the importance of information and knowledge, consumers were asked if they need more information in order to choose the environmentally friendly produced food. 82% of respondents gave a positive response.

Although the respondents of this study represented just a part of the whole Latvian population, some outcomes showed very similar results with other study conducted by DnB Nord Bank, which represents the whole Latvian population. In this particular study 58%

Table 1

Importance of sustainable food issue and stated purchase behaviour of consumers

Theme	Very important/quite important issue, % (number)	Consumers buying particular products, % (number)	Consumers buying particular products, but not as much as they would like to, % (number)
Whether food products are in season	**74** (61)	**38** (30) vegetables and fruits	**47** (37) vegetables and fruits
Whether the food products are produced in Latvia	**84** (53)	**35** (28) vegetables and fruits	**52** (42) vegetables and fruits
Whether food products comply with a healthy and balanced diet and are safe for consumption	**90** (74)	**21** (17)	**56** (46)
Whether the food has been produced ethically and socially responsible	**60** (49)	**6** (5) Fair trade tee or/and coffee	**9** (7) Fair trade tea or/and coffee
Whether animal based products have been produced to high animal welfare standards	**54** (44)	**11** (9) milk, eggs and meat	**43** (35) milk, eggs and meat
Whether the food item has been produced ecologically and with respect to the environment	**72** (58)	**14** (11)	**58** (53) Sometimes buying
Whether the package of the product is recyclable	**37** (30)	-	-

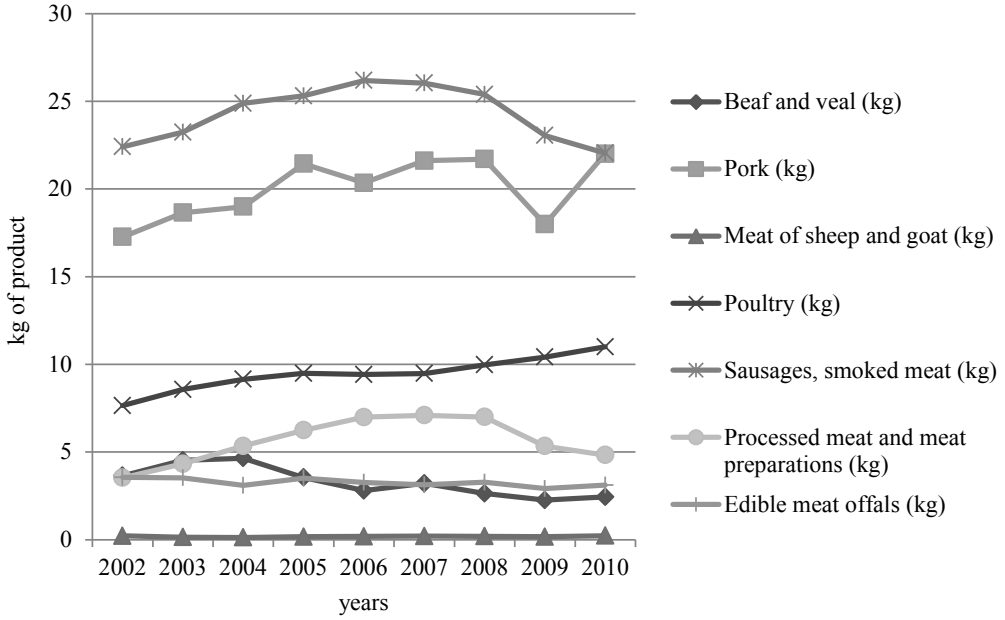

Figure 1. Consumption of meat and meat products in average per household member per year in kg (from 2002 to 2010).

Source: Central Statistical Bureau of Latvia and authors' compilation.

of respondents answered that they sometimes buy ecologically produced food and 14% said they do it on regular basis, in the survey of DnB Nord barometer (2010) these numbers are - 52% buying sometimes, 19% - buying regulary.

Calculations of Ecological footprint of food show that the diet of an average Latvian consumer annually creates from 850 to 950 kg of CO_2. Most (330 kg) of the emissions are associated with the consumption of meat products, in the second place with 110 kg of CO_2 are milk products, followed by vegetables (85 kg of CO_2). Bread and pastries produce 70 kg of CO_2, consumed eggs cause 55 kg of CO_2, but potatoes only 16 kg of CO_2 per year. These figures depend on the amount of consumed food and carbon intensity of the product that can vary considerably between various commodities (Brizga and Dzene, 2011).

In order to explore the sustainability character of food consumption of Latvian consumers, statistical data of food consumption with the biggest impact on the environment was used, i.e. meat and meat products as well as fruits and vegetables, which on other side, usually meet the sustainability conditions.

In Figure1 more positive tendencies towards sustainable food consumption can be observed. First of all the consumption of sausages and smoked meat has been decreasing sharply since 2007. It is mainly positive tendency due to health dimension of sustainable food – these products are high in content of salt and saturated fat. 85% of respondents responded that they are trying to follow the principles of healthy diet. 68% of respondents claimed that they are trying to limit the content of salt and saturated fat (77%) in their food. Awareness about healthy food is obviously growing especially among women.

Secondly consumption of beef is decreasing, what is more important from ecological perspective. Beef has the highest CO_2 emissions among other livestock, and also needs more agricultural land and use of water.

From this statistical quantitative data nothing more about other dimensions of sustainable food is possible to infer.

In the last 8 years (2002-2010) vegetable consumption has been decreasing sharply (see Figure2) and the future trend line as well as R-squared value shows that it is still going to decrease. Partially it can be explained with decreased consumption of potatoes (from 115 kg to 87 kg per capita per year), which is the main vegetable in totally consumed amount of vegetables. From environmental point of view this decrease is not much reducing CO_2 emissions, but from health perspectives it can be evaluated as a positive trend, because the daily nutrition is gradually becoming more diversified. 88% of respondents answered that they are trying to eat fresh vegetables and fruits as much as possible, and this is considered to be a part of a healthy diet; however, it cannot be observed from statistical data, because in all categories vegetable consumption is reduced.

The decrease of fruit consumption is assessed as more negative aspect if examining the source, the decrease comes from. Since 2002 mainly the consumption of apples (from 19 kg to 12 kg per capita) has decreased, but at the same period the consumption

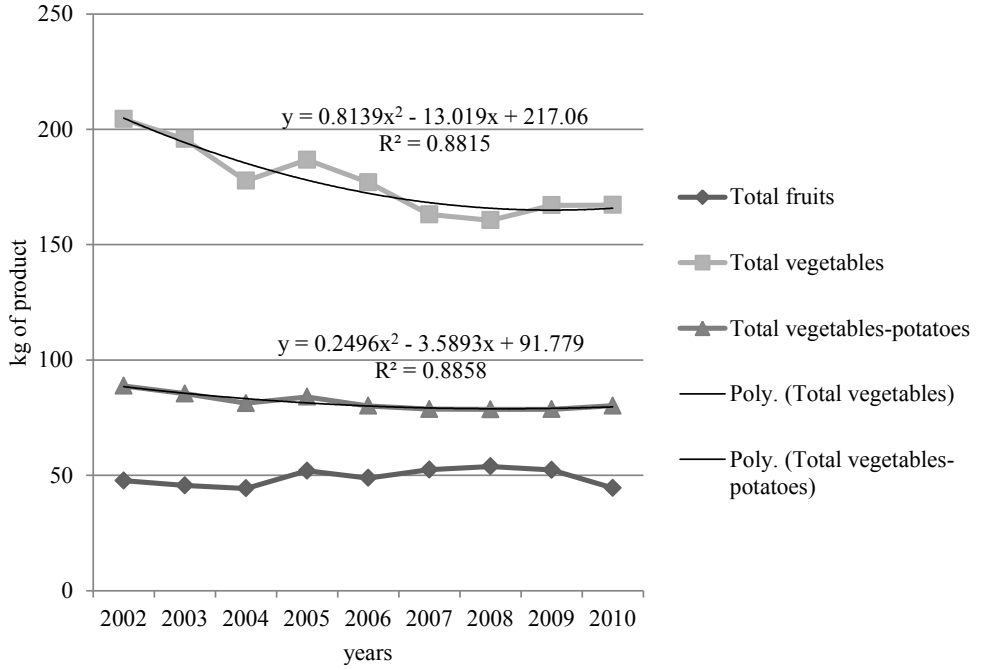

Figure 2. Consumption of vegetables, fruits and its products in average per household member per year in kg (from year 2002 to 2010).

Source: Central Statistical Bureau of Latvia and authors' compilation.

of exotic fruits such as oranges, tangerines and bananas has doubled. This is opposite tendency of sustainable consumption. It increases food miles, i.e. greater CO_2 emissions as well, and it does not support local producers and state economy itself. Unfortunately, fair trade fruits are not available in Latvia's supermarkets, meaning that by eating imported fruits, consumers do not support sustainable consumption in any of sustainability aspects.

85% of respondents agreed that buying locally and seasonally produced vegetables and fruit; they are also taking care of the environment, thus showing good understanding of the issue.

Conclusions

1. The attitudes towards sustainable food consumption among selected respondents were highly positive and noted as important. Healthily balanced diet was rated the highest with 90% classing it as important, while the waste (37%) and animal welfare (54%) were rated the lowest.
2. Evaluating the consumer behaviour towards sustainable food consumption, there is an obvious gap between attitudes and stated behaviour. The positive attitude does not result in the same rate of purchasing behaviour. These results can be interpreted by insufficient knowledge and availability of sustainable food products.
3. Especially low purchasing level is for fair trade (6%) and animal welfare products (11%), that shows the importance of provision of information in raising the awareness of particular issue. 58% of respondents responded that they do not know anything about fair trade products and 36% stated they have some knowledge about it, but it is insufficient to make an intentional choice.
4. 72% respondents answered that they have no idea how to recognize if the products (meat, eggs and milk) are produced considering animal welfare standards.
5. Statistical data of meat consumption shows positive tendencies towards healthy consumption, but data about fruit consumption reflects the growing share towards consumption of imported commodities, that is considered as unsustainable. 88% of respondents state that they try to eat fresh fruits and vegetables as much as possible, that contradicts with decreasing numbers in statistical data. It can be explained with particular group of respondents of this study.
6. The results of the study show a growing perspective of sustainable food market share. Clearer and more understandable information is delivered to consumers, especially women, faster the shift to more sustainable consumption patterns is expected to take place.

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