

CONSUMERS' OPINION ABOUT THEIR OWN FOOD-PURCHASING HABITS- EXPERIENCES OF A QUANTITATIVE STUDY

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SUMMARY

Food waste is produced through the food chain from agricultural raw material production to the households. Dominance of globalized logistics, increased expectations of retailers, changing habits of consumers and difficulties in the planning of the supply chain all contribute to the production of waste material. While losses have already been reduced significantly by developed technologies in food processing and retail, there is still an enormous amount of food waste produced by households every year. Our study endeavours to provide a comprehensive review of consumer's attitude regarding food purchasing and consumption. We used quantitative method (nationwide survey based on personal interviews) for determining consumers' standpoints concerning their own shopping habits. Data were gathered through mentioned interviews with a random sample of 1027 people, aiming appropriate representation of the Hungarian middle class. Between multivariate statistical methods we applied Pearson's chi-squared to ascertain diversity of opinion among respondents.

1. INTRODUCTION

Sustainability considerations have not been significant in the food chain for former centuries. On the other hand, agricultural and food industry technologies have developed for efficiency improvement and cost reduction purposes. Nowadays sustainability aspects have effects on all economy fields (Csutora & Kerekes, 2004; Gaál et al., 2011), thus food industry increasingly starts to focus on the environmental impact of production. While losses in developing countries occur mostly at the stage of raw material production due to obsolete technology, in industrialized countries the majority of food waste is produced by retail, catering and households according to one of FAO's study (2011) titled 'Global Food Losses and Food Waste. This paper evaluates the amount of food waste throughout the whole food chain.

While many food industrial companies could achieve significant results in waste-efficiency, consumers have not changed their buying habits towards sustainability. Reforming human mentality could be a cost effective way to have an impact to the entire food chain and could provide both short and long-time effects. Increased public awareness, thus appropriate shopping habits, use and storage of foodstuff could minimize food losses (Godfray et al., 2010), and would foster adopting sustainability approach at another food chain actors (Meulenberg et al., 2003).

The lack of awareness in buying situations is observable by investigating the amount of household-generated food waste. The first paper in this topic was written in 1975: a research was conducted by Gail and his fellow researchers involve hundreds of households. On the basis of the results it was found that an average American household produced food waste of hundreds of US dollars value a year (Gail et al., 1975). More recent studies report even worse, alarming results (Kantor et al. 1997).

Nowadays many experts, governmental and non-governmental organizations have recognized these problems and organize public awareness campaigns towards reducing food waste in several developed countries (Parfitt et al. 2010). One of the most effective social program is called "Love Food Hate Waste" and launched in the United Kingdom in 2007: according to its' report, a significant reduction (18 %) has been reached in the amount of food waste produced by the analyzed households (www.lovefoodhatewaste.com).

The initial step of designing a campaign to affect consumer habits ought to be an analysis of consumer attitudes and present practices. This study aims to help this process by providing an evaluation of some of the basic attitudes in regard to sustainable consumption.

2. MATERIAL AND METHODS

During the research planning, we aimed to gather appropriate data to represent the middle class of the Hungarian population, but paid attention to gather data from all demographic groups. According to our previous experiences in food related topics, personal interviews result in more relevant data than any other (e. g. telephone assisted or online) methods. The questionnaire based survey is a useful tool for primary data collection. Questionnaire creation is an immensely long process. It demands expertise in need to integrate professional considerations, circumstances of surveys and conditions of data processing (Hajdu-Lakner, 1999). Quantitative studies based on personal interviews require a relatively high budget. We received some help from another research programme, and had the opportunity to integrate our questions in a large-scale survey related food safety in 2013.

In the study, two opposite statements were applied with an attitude scale (5-point Likert scale) to reveal consumer's food-shopping habits:

- Statement A: I usually buy appropriate amount of food and consume everything
- Statement B: I usually buy too much food in the supermarket, I have to dispose the excess

Previous to the survey the entire questionnaire was tested by consumers and experts (n=12). As a result of the pilot survey we could refine the questionnaire and determine the average completion time, which provided important information about the technical realization of the research procedure. The personal interviews were conducted at traffic interchanges of Hungarian cities in the first half of 2013. At the end of data gathering procedure, a n=1027 sample size was achieved, and of the interviews were suitable for statistical analysis with SPSS program package. Data were analyzed by descriptive and multivariate statistical methods.

3. RESULTS

3.1. Profile of respondents

Demographic variables can be used to differentiate consumer groups. The parameters we recorded during the survey are summarized in *Table 1*.

Table 1: Content of the consumer sample

Gender				
Male: 46,51%			Female: 53,49%	
Age				
Aged under 25 years: 47,74%	Aged between 26 and 35: 18,79%	Aged between 36 and 49 years 14,17%	Above 50 years of age: 19,30%	
Habitation				
Budapest: 39,05%		Other city: 48,58%		Village: 12,37%
Qualification				
Elementary: 15,07%		High-school graduation: 40,04%		Degree: 44,89%
Level of income				
High: 1,11%	Above average 9,78%	Average: 53,63%	Below average: 23,59%	Low: 11,90%
Number of people living in the same house				
One person: 11,42%	Two people: 21,99%	Three people: 23,36%	Four people: 26,11%	Five people: 17,10%
Who does regularly the food shopping in your household?				
You: 32,46%		Another person: 19,22%		Together: 48,32%

3.2. Food-purchasing habits

The participants' opinion about their own food purchasing attitude was not absolutely unified. Results of quantitative study indicate that 'buying as much food as reasonably

necessary' is determinative aspect of lifestyle in spite of it consumer behaviour is occasional different – because of different influential factors – in real shopping situation.

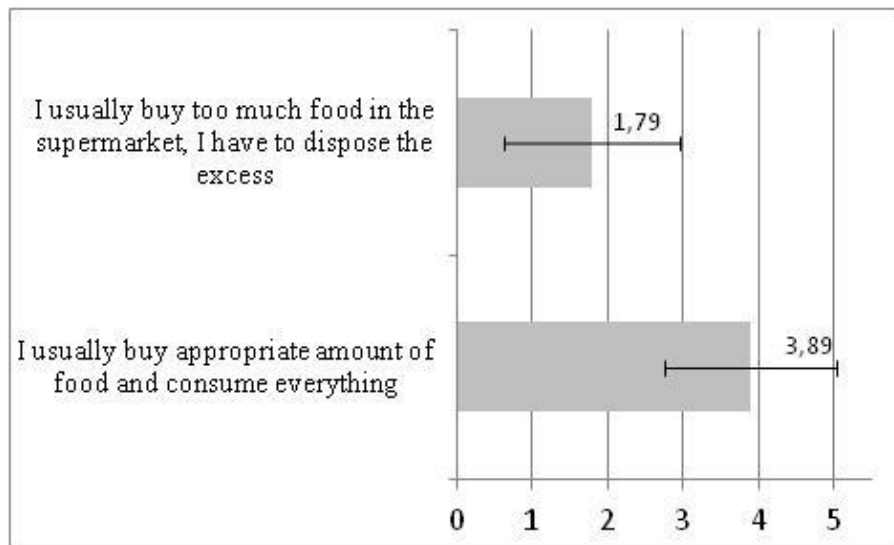


Figure 1: Consumers' opinion about their own attitude in buying situation

The crosstab analysis was done only for that subset of the sample that regularly manages food shopping in the household (32,46%). According to crosstabs results, qualification ($P < 0,01$) and level of income ($P < 0,01$) are significant variables in case of both investigated statements, but no differences observed by demographic segmentation of gender, age, habitation and number of people in a household. In this paper we present only the results of comparing “qualification groups” (Figure 2). Generally, we could point to that majority of the respondents claimed to be aware about their shopping habits. In the same time, the results indicate that people with lower education tend to be more extremists in both directions than people of high school education. While some part of them seemed careless about purchased quantities, the careful persons were found in a surprisingly big number in their ranks. People with higher education tend to be aware in general, but there is a relatively low share of them that care very much about the problem (compared to the other two groups). This phenomenon also related with financial status of respondents, as further crosstab analyses revealed. This is consequent to the finding that level of education correlates to and level of income.

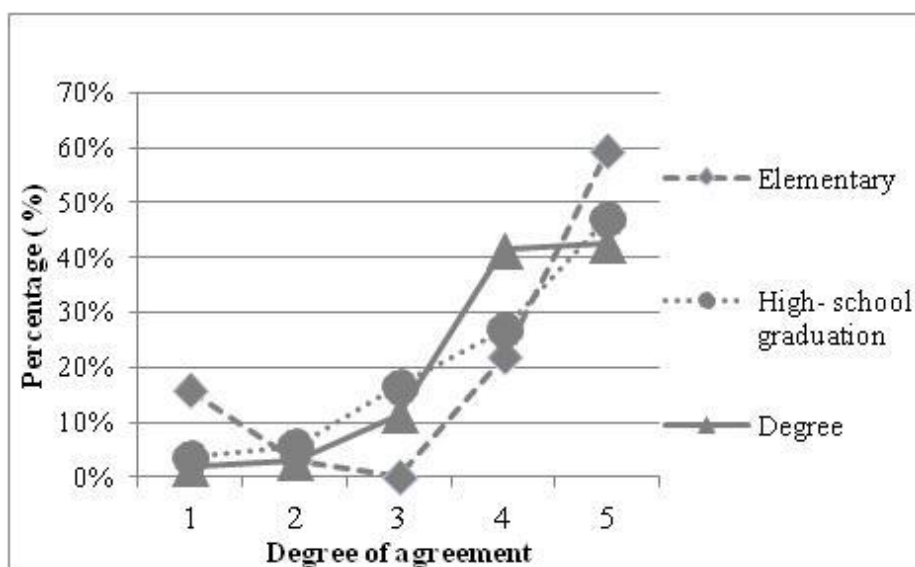


Figure 2: Crosstab of *Statement A* by “qualification groups”

4. CONCLUSIONS

According to the statistical analysis we can see that attitudes of the average consumer fit well to the expectations in regard of sustainable consumption. This let us to conclude that not the attitudes but the habits directly should be focused in a potential campaign. It was an interesting finding that high-educated people admit to waste more food than high school educated persons. In the same time we can presume that people with lower education are not careful about shopping exclusively due to sustainability – low income is also a factor to prevent excess amount of food.

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