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THE EXAMINATION OF THE CULTURAL ASPECTS OF SUSTAINABLE FOOD CONSUMPTION AMONG INTERNATIONAL STUDENTS STUDYING IN HUNGARY

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TABLE OF CONTENT

1. INTRODUCTION

1.1. Research background and problem statement

The topic of my dissertation is the examination of the cultural aspects of the food consumption. Food consumption occupies a special place in consumer behavior in several respects: on the one hand, it is directly or indirectly related tot he substitence of man, on the other hand, it is the result of long biological, social and cultural processes, third the most complex form of human behavior (LEHOTA 2004). There are many factors that affect our diet. In this dissertation, I will focus on the impact of cultural factors on healthy and sustainable nutrition among international international students. Today, in the age of globalization, migration and increasingly intense intercultural encounters, knowledge of multiculturalizm and cultural differences is more timely than ever. Although, in the field of business management, comparisons of individual cultures have spread along different cultural dimensions Bár, az üzleti menedzsment területén az egyes kultúrák összehasonlítása a különböző kulturális dimenziók mentén elterjedtek, it can also be of great importance in food consumption.

The importance of the topic is shown by that food is one of the three consumption factors responsible for most environmental impacts (ANNUNZIATA et al. 2018). According to REISCH et al. (2013) food production and consumption are linked to some of the main environmental impacts such as GHG (greenhouse gas) emissions, water pollution and loss of diversity, which will be exacerbated by a growing population in the future. At the same time, environmental sustainability is a key determinant of food safety, food security and human health. (MYERS et al. 2013). When we choose healthy foods, we often support sustainability, especially in the context of a balanced diet. For example, consuming seasonal, local and varied plant foods is also good for health and the environment. Healthier eating habits also reduce the risk of chronic illness, the cost of health care, and the loss of labor productivity. Overall, food consumption is an important factor in shaping a sustainable food supply, due to its impact on the economic, social and environmental dimensions of sustainability.

The topicality of the topic is given by the fact that the UN International Panel on Resources identifies food production at the global level as the sector with the greatest environmental impact in terms of resource use. – although this effect is much lower in the EU (UNEP 2005.) Food systems use a number of natural resources, including land, soil, water and phosphorus, and require energy to produce, process, package, transport and refrigerate nitrogen fertilizers. It is therefore not surprising that they also have a global impact on the environment, including biodiversity loss, deforestation, soil degradation, water and air pollution, and greenhouse gas emissions. The continuing decline in agricultural

biodiversity at farm level remains a matter of serious concern (COM 2013). Most fish stocks are fully exploited or overfished globally. Therefore, efficient and sustainable management of all such resources is needed to ensure a continuous supply of healthy and affordable food.

Globally, one third of food produced for human consumption will be food loss or waste, equivalent to almost 1.6 billion tonnes of food and accounting for 8% of global greenhouse gas emissions. (FAO 2011). Producing food that is not consumed contributes more than 20% to global pressure on biodiversity and occupies nearly 30% of the world's agricultural land. Around 100 million tonnes of food are wasted in the EU every year, and this is projected to increase further in the near future. Food waste occurs at all levels of the supply chain in Europe, and concentrated at the household level.

Between 2000 and 2050, the volume of food production of animal origin will double due to the increase in population and per capita meat consumption. The consumption of ruminants contributes significantly to the growth of the agricultural land concerned. Meat production contributes not only to greenhouse gas emissions through modern animal husbandry, but also through the cultivation of fodder plants (STEHFEST et al. 2009). When looking for the causes of the environmental burden caused by agriculture, it is very important to look at food consumption habits. However, food consumption habits are very different in developing and developed countries, but in the global market, the latter follow the trends of the former. In response to rapidly changing demand, developing countries such as China, India, Brazil are also facing the problem of reorganizing supply chains, affecting the flow of consumer products. Companies in developed countries have also introduced their products to the markets of developing countries to reap the increased income of consumers there. The question between supply and demand: *what is the real need for food? How do cultural views affect these processes? Can we maintain our sustainable eating habits abroad?*

On the one hand, in my research, I examine the role of culture in food consumption: what differences can be observed in food consumption between different populations, and what cultural factors (e.g., value, religion, traditions, ceremonies, etc.) influence eating habits. On the other hand, I examine the extent to which sustainability considerations appear among the food choice preferences of international university students, and whether there are these differences in students' food consumption habits, particularly with regard to the issue of sustainability.

1.2. Research objectives

Providing a brief historical overview of the structure and development of food consumption based on the synthesis of the literature, on cultural factors that determine food consumer behavior, cultural characteristics, and ways to measure the dimensions of culture. Description of available definitions and models; comparing different theoretical approaches, synthesizing and critically describing them according to my own research. My further goal is to get to know the food consumer habits and the attitudes and motivations of the consumers with the help of qualitative and quantitative research among the international university students, especially with regard to the dimensions of sustainability.

With regard to sustainable food consumption, it is worth making a comparison between different ethnic groups, during which it is possible to find out what differences exist between the sustainable food consumption habits of each ethnic group.

	Objectives related to the literature review:	
O1.	Comparative systematization and synthesis of theoretical models in the domestic and international literature in the field of sustainable food consumption.	
O2.	Use the benchmarking method to explore what good practice solutions exist to promote sustainable food consumption in each country.	
	Objectives related to empirical research:	
O3.	Examining the sustainable food consumption (demand) of international university students based on qualitative research.	
O4.	Examining the supply of university campus business premises from a sustainability perspective.	
O5.	Based on the experience of qualitative research, design a tool for quantitative research and conduct the study. Defining segments in the field of food consumption among international university students in terms of sustainability.	

The main goal of my research:

Examining the factors of food consumer habits and decision-making processes among international university students, highlighting the sustainability dimensions.

My questions related to my main goal:

Q1: Global trends: How has the structure of food consumption developed in Hungary and the European Union in the last decade? What are the current trends in the food market globally? What are the key factors shaping current trends?

Q2: Characteristics and influencing factors of food consumer behavior: What factors influence consumer behavior in the food market? How do cultural factors affect consumption?

Q3: Food consumption and sustainability: What impact does food consumption have on the environment? Are there cultural differences in adapting to sustainable consumption? What solutions do each nation use to promote sustainable food consumption?

Q4: In the framework of qualitative research, my main questions to be answered on the demand side:

- *What type of food do international students consume the most often? Do the students see a difference between the food consumption habits of each ethnic group?*
- *What factors influence students' behavior when choosing food?*
- *Can international students keep their eating habits in Hungary?*

And on the supply side:

- *Have the consumption habits of Hungarian university students changed with the appearance of international students?*
- *How can supply adapt to changing demand?*

Q5: In the quantitative survey, I would like to assess the food consumption habits of international students, within which I am curious that:

- *What type of food do international students consume the most often?*
- *What factors influence international students when buying food?*
- *How do international students judge aspects of sustainability?*
- *Can there be a link between gender and special diet for international students?*
- *Can homogeneous groups be created among international students based on their attitudes towards sustainable food consumption?*

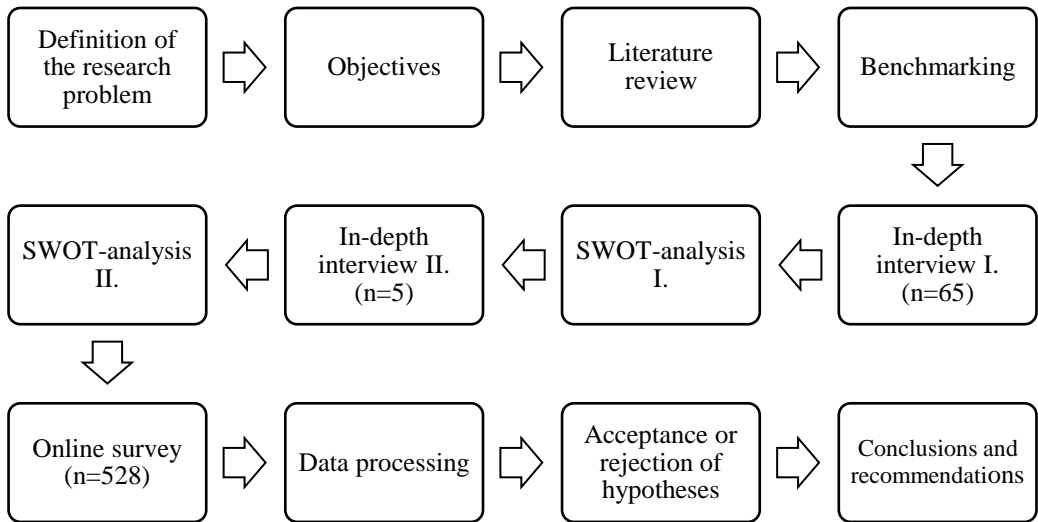The flow chart of the research is shown in Figure 1.

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│ Definition of│      │             │      │  Literature │      │             │
│ the research │ ⇨    │ Objectives  │ ⇨    │   review    │ ⇨    │ Benchmarking│
│   problem    │      │             │      │             │      │             │
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┌─────────────┐      ┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│ SWOT-analysis│      │  In-depth   │      │SWOT-analysis│      │  In-depth   │
│     II.     │ ⇦    │ interview II.│ ⇦    │     I.      │ ⇦    │ interview I.│
│             │      │   (n=5)     │      │             │      │   (n=65)    │
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┌─────────────┐      ┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│ Online survey│      │             │      │Acceptance or│      │             │
│   (n=528)   │ ⇨    │Data processing│ ⇨  │ rejection of│ ⇨    │Conclusions and│
│             │      │             │      │ hypotheses  │      │recommendations│
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Figure 1. Flow chart of the research
Source: Own research, 2020

1.3. Hypotheses

H1: As a result of global migration trends, new trends are emerging in domestic food consumption.

H2: There is a relationship between the type of food consumed and sustainability.

H3: The meaning of sustainable food consumption is primarily related to the preservation of family, community life and health.

H4: Cultural factors greatly influence the food choices of international university students.

    H4a: Domestic eating habits affect the eating habits of international students and modify several elements of them.

    H4b: Due to their strong cultural background, international students retain a substantial part of their nutritional and social values, even during their longer stay abroad.

    H4c: The food consumption habits of international students influence the eating habits of Hungarian students and influence the supply; thereby contributing to the strengthening of sustainable food consumption.

H5: Well-separable segments can be formed among international university students based on sustainability criteria.

H6: Segments created on the basis of sustainability criteria have unique characteristics compared to other food consumer segments.

2. MATERIALS AND METHODS

2.1. Hypotheses and methodological relationships of the research

The hypotheses raised during the research and their methodological relationships are presented in Table 1 and 2, respectively.

Table 1. Acceptance or rejection of hypotheses

HYPOTHESIS	ACCEPTANCE	REFERRED TO
H1: As a result of global migration trends, new trends are emerging in domestic food consumption.	✓	Secondary data
H2: There is a relationship between the type of food consumed and sustainability.	✓	Secondary data
H3: The meaning of sustainable food consumption is primarily related to the preservation of family, community life and health.	✓	Qualitative research
H4: Cultural factors greatly influence consumers' food choices.	✓	Secondary research
H4a: Domestic eating habits affect the eating habits of international students and modify several elements of them.	**X**	Primary research: qualitative research
H4b: Due to their strong cultural background, international students retain a substantial part of their nutritional and social values, even during their longer stay abroad.	✓	Qualitative research
H4c: The food consumption habits of international students influence the eating habits of Hungarian students and influence the supply; thereby contributing to the strengthening of sustainable food consumption.	✓	Qualitative research
H5: Well-separable segments can be formed among international university students based on sustainability criteria.	✓	Secondary research
H6: Segments created on the basis of sustainability criteria have unique characteristics compared to other food consumer segments.	✓	Qualitative research

Source: Own research, 2020

Table 2. Research objectives and methodological relationships

RESEARCH TOPIC	GOALS	HYPO-THESES	DATA COLLECTION METHOD	METHOD OF ANALYSIS	NEW SCIENTIFIC RESULTS
Global trends in food consumption. Emergence of new trends	**G1**	**H1**	literature review in depth interview	content analysis	
Promoting sustainable food consumption	**G2**	**H2**	literature review	benchmarking	**R1**
Sustainable food consumption habits of international university students	**G3**	**H3 H4 H4a H4b H4c**	literature review in-depth interview	content analysis, SWOT analysis	**R2**
Examining the business premises of the university campus from the point of view of sustainability	**G4**	**H4c**	in-depth interview	content analysis, SWOT analysis	**R3**
Definition of segments among international university students	**G5**	**H5 H6**	online survey	factor analysis, cluster analysis, Kruskal_Wallis test	**R4, R5**

Source: Own research, 2020

2.2. Secondary research

During the study of the literature, I described the global trends and prevailing trends in the field of food consumption, for which I primarily used the surveys of the domestic and international literature. In connection with the attitude of the

8

population towards health-conscious and sustainable consumption, I examined the available domestic and international research and presented the results of the research, highlighting their common and different features. These secondary sources can be considered reliable in that they come from a credible source, as they are derived from the results of original, own data collection of scientific research, and for the majority, the sample is well representative of the population. After processing the available literature and evaluating the domestic research, I came to the conclusion that they are not completely relevant to my research topic, as they were originally prepared for a different purpose and do not fully cover the research scope to be examined. However, they have certainly proved useful for defining concepts as well as for a theoretical approach.

In view of all this, in order to achieve the objectives of my research, therefore, in addition to the secondary research, primary research had to be carried out as well. The adequacy of the secondary information was evaluated according to a specific set of criteria (sample size, representativeness, purpose, survey method, nature, timeliness, reliability). In the second part of the secondary research, I used a benchmarking method to analyze what good solutions each country uses to promote sustainable food consumption.

2.3. Qualitative research, in-depth interviews: Phase 1 (demand side)

I conducted my research on the topic using a qualitative method, in the form of an in-depth interview. The interviews were conducted by the master's students of international and Hungarian management and organization of Szent István University in the framework of the subject Multicultural Management, with persons of non-Hungarian origin. A total of 65 in-depth interviews were conducted between 2017 and 2018. The language of the interviews was different, based on the language in which the interviewee was best able to communicate with the interviewer. This was, in most cases, English. The average length of the interviews was 50 minutes, and the length and language of the transcripts were also very varied. As this is a qualitative research, I also used qualitative methods in the data analysis: content analysis. Demographics were quantified where possible. The interviewees came from 22 different nationalities, most of them named Hungary as their current place of residence at the time of the interview. Interviewees who were not in Hungary were typically interviewed on Skype or by telephone. The in-depth interview was conducted on the basis of an interview outline. The interviews were recorded, transcribed and translated. The results of both in-depth interviews were also presented in the form of a SWOT matrix in order to get a more comprehensive and transparent picture of the interviewees' opinions.
The purpose of applying the SWOT method is to explore the factors that have a positive and negative impact on sustainable consumption patterns. The advantageous conditions and opportunities that can be explored will help maintain

the healthy eating habits of international students. Discoverable adverse conditions and critical factors accelerate the loss of sustainable consumption patterns. In the SWOT analysis, we rank the strengths, opportunities, weaknesses and threats related to sustainable consumption in a matrix.

2.4. Qualitative research, in-depth interviews: Phase 2 (supply side)

In addition to the demand side, I also extended my research to the supply side, where I visited various university catering establishments / shops in order to find out how consumer needs changed as a result of the appearance of international students and whether it had an impact on domestic supply. On the other hand, I was also curious if the food consumption habits of international students would change during their longer international stay. I also used the in-depth interview method to examine the supply side. The interviews were conducted in early April 2019, in the business premises of Szent István University in Gödöllő. The examined business premises are listed in Table 3.

Table 3. Turnover of Szent István University (Gödöllő) business premises

	NAME OF THE BUSINESS	TYPE OF THE BUSINESS	INTER-VIEWEE	BUSINESS TURNOVER
A1.	SZIE Kalória Kft. MENZA Önkiszolgáló	Restaurant	Manager	500-600 customers/day
A2.	Menza Bisztró	Restaurant	Manager	700-750 customers/day
A3.	SZIE Bagoly Büfé	Buffet	Director	300-400 customers/day
A4.	Koli Büfé	Buffet	Shop assistant	600-700 customers/day
A5.	Gödöllő COOP SZIE	Shop	Deputy Store Manager	1200 customers/day

Source: Own research, 2020, n=5

Structure of the in-depth interview (questions of the interview outline):

– Which food is the most popular in your restaurant / shop? What types of foods do consumers prefer? (pasta, pizza, vegetarian food, street food, salad, alcoholic, etc.)
– Have you experienced any changes in food consumption in recent years as a result of a higher proportion of international buyers? If so, what change have you experienced? (eg meat-vegetable consumption rate, special needs, etc.)
– What types of guests visit your restaurant / shop most often? (Who is your target group?) (Nationality, age, wealth, etc.)
– Have you seen a change in your guest base in recent years? (very changed - moderately changed - slightly changed - not changed at all)
– Are there any new trends in the operation of restaurants? (eg preference for fresh produce, promotion of home-made food, preference for local food, emergence of new healthier foods)
– Does the appearance of international students affect your offer? Did you have to change anything about it? (introduction of ethnic products, expansion of supplier relations)

2.5. Quantitative research

My research questions are: *(Q1) Which types of food are most often consumed by international students? (Q2) What factors influence food choice? (K3) Which of the cultural factors are most important to them in food consumption (Q4) How do students judge sustainability aspects? (Q5) Can homogeneous groups be created based on consumers' attitudes towards sustainable food consumption?*
The survey, as a continuation of previous research, was conducted between March 2020 and December 2020, with online interviews of 528 people using a standardized questionnaire. The sample: The sampling was carried out according to a sampling plan.
Data processing was performed with IBM SPSS 24 statistical software package. I also used MS Excel for the analyzes and the presentation of the results. In my research, the chosen significance level is 5% (0.05). During the data processing I used univariate methods and cross-tabulation analysis. During the crosstab analysis, I considered the results where $p < 0.05$ and the analysis meets the requirements of the crosstab to be reliable: 1. The expected value must be at least 1 in each cell. 2. A maximum of twenty percent of the cells may have an expected value of less than 5. (SAJTOS - MITEV 2007). When choosing the statistical methods, I basically took into account the type of variables included in the questionnaire (nominal, ordinal).

As a univariate method, I used various basic indicators (frequency, percentage, mean, standard deviation, median, mode) and checked the conditions necessary for the analyzes (normality, examination of outliers and missing values). In addition to the univariate and crosstab method, I also performed a multivariate method: factor analysis and cluster analysis.

3. RESULTS

3.1. Results of secondary research

The hypotheses set up in my research were confirmed or rejected as follows:

H1: As a result of global migration trends, new trends are emerging in domestic food consumption.

This assumption has been verified. Based on both literature sources and the results of qualitative research, we can state that the emergence of international students changes the food supply on the supply side, and thus also influences the consumption habits of domestic students. International students have significantly changed the list of products on offer, but it is definitely typical that with this change, healthier products have come to the fore on the shelf. As the proportion of vegetable and fitness and chicken products has increased significantly, Hungarian students often choose this instead of pork.

H2: There is a relationship between the type of food consumed and sustainability.

This hypothesis has been verified. We can see that when we choose healthy foods, we often support sustainability, especially in the context of a balanced diet. Consumption of seasonal, local and varied plant foods is also good for health and the environment.

3.2. Sustainable food consumption habits of international university students

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H3: The meaning of sustainable food consumption is primarily related to the preservation of family, community life and health.

This assumption was successfully verified based on qualitative research. Based on both qualitative and quantitative research, I concluded that sustainability food characteristics do not appear among personal preferences. Other values play a much more important role in the food consumption of international university students.

H4: Cultural factors greatly influence the food choices of international university students.

This hypothesis was confirmed. It has been evident in the past, based on the literature and various researches, that cultural factors influence consumer behavior. In this research, we also saw that cultural factors also play a significant role in the case of international university students. International students bring with them their cultural roots and traditions; have a strong cultural background. Of course, it is another question how long they can keep this during a longer international stay. Further questions arise as to whether the traditions of the host country influence the eating habits of these students and how international students themselves influence the customs of the host country, the supply of shops.

Based on the interviews, the SWOT matrix shows that representatives of different nations adhere to their eating habits and foods.
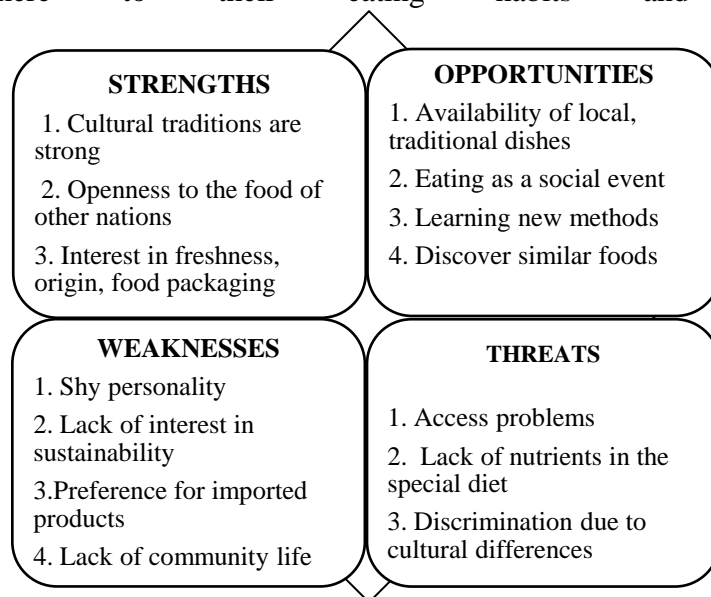
STRENGTHS	OPPORTUNITIES
1. Cultural traditions are strong 2. Openness to the food of other nations 3. Interest in freshness, origin, food packaging	1. Availability of local, traditional dishes 2. Eating as a social event 3. Learning new methods 4. Discover similar foods
WEAKNESSES	THREATS
1. Shy personality 2. Lack of interest in sustainability 3.Preference for imported products 4. Lack of community life	1. Access problems 2. Lack of nutrients in the special diet 3. Discrimination due to cultural differences

Figure 2. SWOT-analysis of sustainable food consumption of international students
Source: Own research, 2019

H4a: Domestic eating habits affect the eating habits of international students and modify several elements of them.

This assumption was only partially substantiated. One of the most important findings of the research is that continuing studies on food consumption habits and community behavior is crucial because students are interested in knowledge of diet and cultural traditions. They are happy to read information about the habits of other nations, the development of consumption habits and community preferences.

The research proved that eating habits in Hungary affect the eating habits of international students and eating habits in Hungary and modify them in several elements. The study concludes that eating is a complex decision that has significant environmental and social impacts. However, it should also be added that in the long run this is not necessarily a permanent phenomenon.

> **H4b: Due to their strong cultural background, international students retain a substantial part of their nutritional and social values, even during their longer stay abroad.**

This hypothesis was confirmed. Although international students are mostly young people who travel a lot and are open to the culture of the host country, they still retain their eating habits in the long run. Although international students are eager to try new flavors and foods, they still stick to the flavors they are used to at home during long-term studies or, if that is not available, to internationally well-known, popular foods. It is difficult to change already entrenched national traditions. Eating is also a social event, food has many functions.

3.3. Examining the supply of university campus business premises from a sustainability perspective

> **H4c: The food consumption habits of international students influence the eating habits of Hungarian students and influence the supply; thereby contributing to the strengthening of sustainable food consumption.**

This hypothesis was confirmed. International students are primarily looking for their own tastes and internationally known dishes. Most international buyers are looking for vegetarian and vegetable products. Of the meat products, most chicken meat and chicken products are sold internationally. International students are mostly looking for home-made flavors and internationally well-known dishes at the university. The range of healthy foods in stores needs to be constantly expanded to meet the expectations of international students. The consumption of traditional Hungarian food is constantly decreasing. International students clearly prefer healthier foods. As the proportion of vegetables and chicken products has increased significantly, Hungarian students are also more likely to choose these products over less healthy, fatty pork.

So international students have significantly changed the product lists in stores, but definitely healthier products have been put on the shelf with this change. The result of the research is that cultural factors have an impact on the consumer environment.

The introduction of experimental products and foods is ongoing in stores. The number of foods on the permanent menu is constantly rising, with one restaurant offering 7 types of menus to consumers, for example. Due to the preference for vegetable products, the volume of vegetable deliveries increased in each store. Due to the high level of vegetable consumption, the share of not only seasonal vegetables but also imported vegetable products has increased. In the case of the surveyed stores, it can be said that the sources of supply can respond flexibly to new consumer needs. They can procure any product (organic, natural) or from any country within days.

We cannot give an exact answer to the question of how long people keep their consumption habits abroad from their place of birth. We don't even know exactly how the food supply systems in the target areas are changing as a result of the emergence of international consumers, but the fact is that they are changing. With the presence of international students, the ever-increasing variety of consumption demands is disrupting consumption and resulting in companies increasingly competing to win over consumers.

Stores are able to adapt continuously and flexibly to changes in demand by changing supply. Healthier foods are increasingly emphasized in the selection of stores surveyed. International students do not like fatty, spicy Hungarian dishes. Stores are constantly reviewing their offerings; newer and newer products are being introduced to meet the needs of international students. There are experimental products that manufacturers assemble and distribute according to the needs of international consumers. As a result of changes in supply, more organic and healthier products are created. The increased proportion of new, healthier products also encourages Hungarian consumers to buy from these products more often. All this results in the case of the examined shops that traditional Hungarian foods are increasingly pushed out of the supply. The main issue of the SWOT analysis is that the business premises around the university campus are suitable to serve sustainable consumer needs:
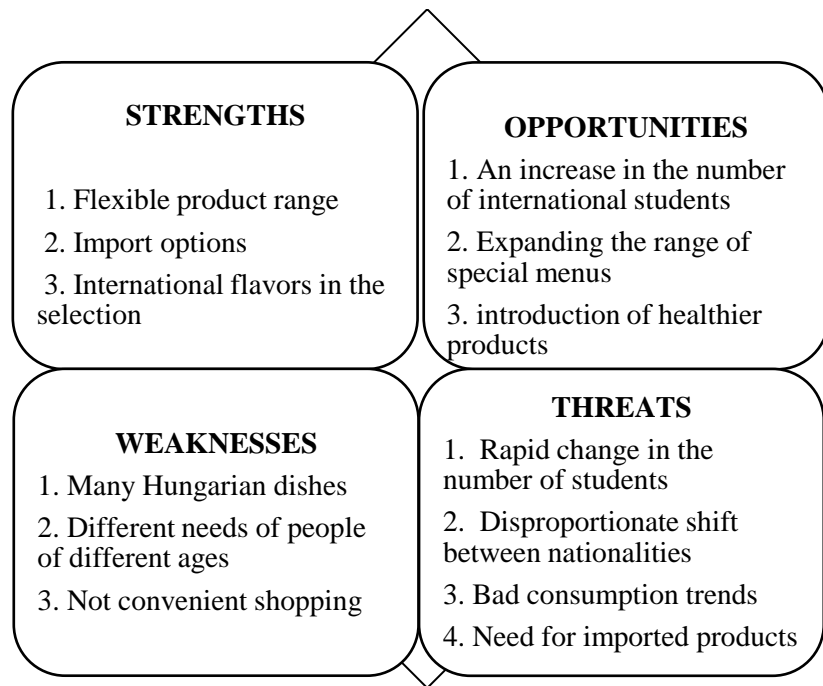
Figure 3. SWOT-analysis of sustainable business premises of Szent István University campus (Gödöllő)
Source: Own research, 2019

3.4. Results of quantitative research: sustainable food consumption habits of international university students

The largest proportion in the sample is the 18-29 age group (77.1%). They are followed by the 30-39 age group with 16.7%, then the 40-49 age group (6.3%), and finally the 50-59 age group with 2.1%. Examining the current employment of the respondents, it can be stated that the vast majority of them (253 people) are not working. 132 people work full time and 110 people work part time. 33 people are in other status. 78% of the university students surveyed live in a big city and 17% in a small town. 5% of them live in other settlements.

Respondents' preferred food type is 53% vegetables, 26% meat, meat products, 9% cereals, 4% dairy products and 3-3% fish and fruits. consumed (3.88), followed by fast food (2.96), finished food (2.909), then semi-finished products (2.75), and finally frozen products (2.65). In the case of the respondents, purchasing from the hypermarket / supermarket is the most common (274 people). Also, a large number of international students shop at local school canteens (146 people), various specialty stores (54 people), and at the local market (35 people). Other fewer places of procurement have been marked by far fewer (16 people), while only 3 people procure food from their own production.

Based on in-depth interviews with international university students, I also queried the cultural factors that emerged during the quantitative research. The results show that one of the most important values in food consumption is maintaining health (4.08) and eating as pleasure (4.03). Traditional food (3.9) and trying new food (3.87) also received higher values. Among respondents, environmental considerations (3.35) and traditional family division of labor (3.08) were less important in food consumption.

H5: Well-separable segments can be formed among international university students based on sustainability criteria.

This hypothesis could be verified on a representative sample. Among the heterogeneous population, 5 relatively homogeneous groups were created, the members of which judged the importance of sustainability differently. Thus, it is necessary for food supply companies to develop different marketing strategies when designing their offerings to win over consumers in each group.

H6: Segments created on the basis of sustainability criteria have unique characteristics compared to other food consumer segments.

Hypothesis 6 could be verified on a representative sample. During the quantitative research, using the Kruskal-Wallis test, I found that the median of the studied groups is different, so that each group shows unique characteristics compared to the other segments.

4. CONCLUSIONS AND RECOMMENDATIONS

In my research, I studied the cultural differences in food consumption in the first round with in-depth interviews recorded by university students. We could see that participants interpret the concept of culture in very different ways, but we could also see repetitive elements in the interpretation of the term, such as tradition, customs, and lifestyle. International students 'favorite and most eagerly consumed foods range from an extremely wide range. It was clear that food plays a fundamental role in the daily lives of individual nations. However, food and meals not only serve as a means of subsistence, but can also perform other functions in a given society, such as food can express belonging to a social class, reveal income differences, and express identity. This is exactly the same as what can be found in the literature review. My aim was also to highlight the relationship between type of consumption and sustainability. For international students surveyed, the importance of sustainable food consumption is primarily to preserve family, community life, and health. Based on the survey, we can conclude that sustainability food characteristics defined in the scientific literature do not appear among personal preferences. People living abroad actively cooperate in the food consumption system. International students regularly dine in restaurants where they can get closer to their own cultural background. The specific impact of food consumption on community life is most visible when the size of the population of a given nation increases. The results of the first phase of the research showed that international students maintain their home consumption habits abroad. They are looking for dishes in restaurants that resemble the flavors they are used to at home. They buy in stores where very similar or the same products are available as in home stores. The majority of students interviewed identify a sustainable diet by consuming the usual food. It can also be stated that the consumption of healthy foods during a stay abroad is much more significant than at home. This is an interesting phenomenon, but it is understandable that more attention is being paid to healthy eating in an unfamiliar place. It turned out that international students are best able to follow their consumption habits when nearby stores and food service providers respond flexibly to changes in demand. International student consumers also prefer standard, fresh food, but they are not always available in local stores. However, higher demand for specialty goods may increase the share of imported products, leading to a negative shift in sustainable consumption.

The main findings of the research are summarised *on the demand side:* international students can maintain their sustainable eating habits in Hungary, but they also have to face the difference in dietary habits, which can obviously be different from ours. In this case, openness can be a critical factor. On the positive side, foreign students travel a lot, so they are open to learning about other nations.

They are happy to try local food as well. According to my results, one of the main factors influencing the choice of food by international students studying in Hungary is freshness and taste, which can best be achieved by purchasing local food. The other main strength, according to the research, is that most interviewees belong to the younger generation, who are more open to testing new foods, experimenting with new cooking techniques and improving knowledge of food preparation. Changing food choices and cooking methods can help promote sustainable food consumption. Strong cultural traditions can be a disadvantage on the positive side: too strong cultural traditions can hinder the testing of new foods. Another fundamental problem in achieving sustainability is the lack of interest in sustainability. When you travel abroad, a serious problem can be caused by a lack of availability of familiar food. It's probably going to take a while for the person to get used to local food. It can also be a problem if someone follows a special diet.

On the supply side: In view of the development of the clientele, the number of foreign buyers is increasing year on year in the premises under investigation. In the case of the university restaurant, 60% of the previous guests remained the same, while the other 40% were constantly changing, mainly international students. In other business premises, the proportion of international students is close to 50%. Students come from a wide range of nationality and this should be taken into account when designing the offer of shops. International students prefer chicken and completely meat-free products. Demand for higher-priced products increased with the emergence of foreigners.

The results of the research show that identifying the real food needs of a given community is a challenge. Sustainable or healthy food consumption changes frequently and is highly dependent on the ethnic composition of a given community. So the question is how cultural influences affect these processes in global systems. The majority of respondents also said that local products are bought and consumed because they are fresh and safer. Local foods are usually cheaper and that is why they are happy to buy these products. The consumption habits of international students in local food chains are therefore very complex as they seek different content values based on their cultural habits. As a result, the former standard food supply is constantly transforming, while also influencing producer and supplier systems by purchasing local and cheap products. How these effects affect the supply chain is highly dependent on the proportion and number of consumers of international students. With the emergence of international students, the food supply changed in the business premises of the university under investigation, which also affected the consumption habits of hungarian students studying there. The healthier eating habits of international students also influence the consumption habits of Hungarian students. There has been a change in supply of healthy products.

A change can be observed in the preference of oat food, and the consumption of more vegetable and fruits. Customers are much more demanding that the sandwiches contain more salads and vegetables. Hungarian students also more often choose vegetables and light fitness meals. International students also love natural yogurt. But fruit is also consumed in larger quantities: they especially like bananas, they buy apples and oranges a little less often. Primarily and mainly students are the target groups of the shops, everyone spends more, year after year, e.g. the average basket price increased from HUF 1,500 to HUF 2,000. International students usually buy more than Hungarian students. The target group of grocery store sales is primarily the younger generation. 70% of students are represented by students and the older age group (over 25) is 20%. The range of healthy foods needs to be constantly expanded to meet the expectations of foreigners. Consumption of traditional Hungarian food is constantly declining and is often completely excluded from the selection. Demand for premium products, i.e. more expensive products, is constantly increasing. These products are fundamentally expanding the range of healthier products. International students really like home flavors and are looking for similar products in local stores. These products usually contain much more vegetables and less spices than previously sold foods. In general, food consumption is turning to healthier foods. Food seasoning is reduced, less salt, pepper and pepper are used in the kitchen. The taste of the food is becoming more and more neutral, more international, everyone can consume it. For the stores surveyed, buying sources can respond flexibly to new consumer needs. They can get any product (organic, natural) or from any country within a few days. Due to the increase in the consumption of canned and semi-finished products, the share of imported products also increased. The number of foods offered on the permanent menu is constantly increasing, for example, one restaurant offers seven types of menus. Due to the preference for plant products in each store, the volume of plant delivery has increased. Due to the high level of vegetable consumption, imports of not only seasonal vegetables but also plant products have increased. The volume of imported products, whether fresh or durable, is constantly increasing.

As a result of the questionnaire survey, it can be seen that there are significant differences in the food consumption habits of international students: among the respondents, vegetables are mostly consumed by students from India, Pakistan, France and Germany. Meat is consumed the most by students from Azerbaijan, Nigeria, Poland, Romania and Ukraine. Fish and seafood are most popular among Mediterranean (Italian, Spanish) and Chinese students in the study sample. International students also have different views on aspects of sustainability in food choices. Thus, it is necessary that different business premises and companies apply a different marketing strategy in order to win over the consumers of each group when developing the product range. Based on the characteristics of each cluster, my suggestions are as follows for each cluster:

Skeptics: Group members are reluctant to both local food and environmental sustainability, so these consumers need to be made aware of how buying local products and choosing the right diet contributes to maintaining their health, reducing disease and protecting the environment. to protect. In this task, education and dissemination of knowledge play an outstanding role.

Those who believe in local consumption: As these consumers prefer local products, locality and the support of ethical producers, it is important for them that seasonal vegetables and fruits appear regularly in the offer of the shops. Preference should be given to local sources of supply. In their case, it may also be useful to market products that are recycled packaging.

Special diet followers: Members of the cluster are strongly characterized by following some special diet, so it is important to gain the trust of consumers. This can best be achieved by providing them with the widest possible information about their products in order for them to be able to provide consumers with the right information. Given that members are influenced by advertising in their purchasing decisions, the company should seize these tools to get their messages across to these consumers. During the advertising campaign, it is worth emphasizing the security of the message.

Indifferent consumers: These consumers are less attached to local products and the issue of sustainability is not an important consideration when buying food. It would therefore be useful to draw attention to the importance of their active involvement in protecting our environment when developing their marketing strategy. By choosing the right diet, buying local products and reducing waste, they can not only protect the environment but also help maintain their own health.

Green Consumers: Group members have a broad knowledge of healthy eating and sustainability issues and consider it important to take action to do so. Quality is also particularly important to them, so displaying high quality products can be the main goal in developing a marketing strategy and product range. Thus, it would be advisable to pay attention to other properties of the product, such as packaging, during product design. By expanding the offer, it is also possible to increase the number of customers.

The results of the research show that defining the real food needs of a given community is challenging. Sustainable or healthy food consumption changes frequently and depends to a large extent on the ethnic composition of the community. So the question is how cultural influences affect these processes in global systems. Based on the results of the research, I consider it important that decision-makers and business leaders make further efforts to promote sustainable food consumption. Consumers need to understand the impact of diet, especially meat consumption, on our environment. Attention should also be drawn to the importance of changing personal diets. Consumers should be encouraged to switch to a diet with a lower carbon footprint.

To do this, the availability and accessibility of sustainable food must be increased, also, reliable and credible information must be provided to consumers.

In line with the EU recommendation, it would be important to introduce a "Sustainable Food Label". These steps may also be important for international students; in particular, in terms of accessibility and a uniform labeling system, so that they can maintain their sustainable eating habits abroad. In addition, I consider it appropriate to carry out further research to find out how to overcome the obstacles that prevent consumers' convictions from changing in favor of environmental factors.

In addition, I consider it appropriate to carry out further research to find out how to overcome obstacles preventing consumer beliefs from changing in a positive direction from the point of view of environmental factors. The results of this research also provide a good basis for planning future research to measure the different migratory effects. Changes in local supply systems can also have a significant impact on the relationship between consumption and local production. These should also be further examined. From a global perspective, the adaptation of environmentally friendly behaviour is not automatic; this requires the joint efforts of the main stakeholders (government, businesses, individual consumers). The adoption of new ideas depends on the media, culture, the legal environment and other relevant aspects. It is therefore essential to examine all differences in the mastery of environmentally friendly behaviour.

I also consider my examination to be important because the emergence of international university students and the continuous increase in their number have a strong impact on the Hungarian economy. In addition to food consumption, university students spend significant amounts of money on housing, pleasure goods, hygiene, travel and tourism. Their presence can therefore generate significant revenue for the Hungarian economy. International university students also have a positive impact on employment, with their spending increasing the labour force significantly. University students also have a positive impact on gyms, catering establishments and real estate agents, as well as on the labour market. The expenditure per capita of the international students studying here is much higher than that of the Hungarians. This also means that universities and, at the same time, cities must address the needs of international students. The emergence of international students leads universities to make significant improvements in order to make international students feel better in Hungary. But it is necessary not only from universities, but also from cities, to provide adequate community spaces, entertainment facilities and infrastructure for international people. This is also important because these students spend quite a few, often 5-6 years, in our country. They learn our culture, they learn the language. Some of them may settle here in the longer term, start a job or start a family.

The limitations of the research are that, as the material, personal and time conditions of the research were limited, quantitative interviews were based on a relatively small number of studies. Another limitation is that the interview was conducted online, so the existence of the Internet was a prerequisite for the research. However, the advantage of asking online is that it is the easiest channel to reach university students, who are primarily young people. Although, in terms of the method of sampling, it is not accidental sampling and the sample cannot be considered representative of the entire population, therefore too far-reaching conclusions cannot be drawn; however, the results can be useful to marketing managers for the reasons mentioned above. Qualitative research on the demand side was carried out on a smaller and representative sample, so that no conclusions could be drawn from the composition of the respondents. The research presented does not represent all international university students living in Hungary.

In the case of in-depth interviews, generalization of results is essentially not possible because it is based on a small sample and does not use random sampling methods. However, the examination carried out on the supply side was complete on the university campus in Gödöllő, as the offer of all commercial premises on the campus was assessed. The study has therefore yielded new results which have not yet been published and scientific conclusions can be drawn from this.

In view of the other possible directions of the research, it would be appropriate to re-carry out the research in a representative sample with a much larger number of elements. The re-research could also examine how food consumer habits and consumer preferences change over time in terms of sustainability. I also find it worthwhile to look more deeply at the cultural and motivational factors behind consumer habits in the context of future research.

5. NEW AND NOVEL SCIENTIFIC RESULTS

The dissertation provides an overview of international students and the Hungarian literature on the topic in a way that synthesizes several disciplines. In my dissertation, I used and evaluated the latest relevant social science, economics, and ecological sources. Based on a review of the literature, I came to the conclusion that **- although many researches have already examined the determinants of environmentally conscious behavior - there is little research examining differences between countries / cultures in this field, so my dissertation can be considered unique in the Hungarian literature.**

R₁: I carried out the practical processing of the topic using a benchmarking method, during which I compared the purpose, budget and effectiveness of the communication campaigns initiated by each country. Based on the study, it can be concluded that **the wider the audience reaches the audience and the more precisely the communication tool appropriate to the target group is defined, the more effective its impact on behavior will be.**

R₂: In addition to the literature, based on the results of in-depth interviews, I also demonstrated that **there is a relationship between the type of food consumed and sustainability**. I found that**, thanks to their strong cultural background, international students retain a significant portion of their nutritional and social values, even during their longer international student stay.**

R₃: With the presence of international students, the food supply has changed, which has influenced the consumption habits of Hungarian consumers, thus contributing to the strengthening of sustainable food consumption.

R₄: During the cluster analysis, **I formed 5 relatively homogeneous groups among international university students using the previously created factors**. These clusters are: **skeptical, local consumers, special dieters, indifferent, green consumers.** I characterized the homogeneous groups on the basis of sustainability criteria, food consumer habits, and demographic characteristics.

R₅: During the quantitative research, using the Kruskal-Wallis test, I found that the median of the studied groups is different, so that each group shows unique characteristics compared to the other segments.

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