Theses of a doctoral (PhD) dissertation

THE EXPLORATION OF CONSUMERS' DECISION MAKING WITH SPECIAL ATTENTION TO INFORMATION PROCESSING ON THE HEALTH FOOD MARKET

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Debrecen, 2019

1. THE SCIENTIFIC BACKGROUND, OBJECTIVES AND HYPOTHESES OF THE RESEARCH PROGRAM

Health conscious behaviour and the conscious selection of a diet supporting a healthy lifestyle is an increasing trend today. Our hectic lives resulting in the prevalence of civilization- or lifestyle-related diseases can shock and at the same time compel consumers to reconsider their way of living. Furthermore, the prevention or fight against harmful influences on health gain added significance. Leading food consumption trends emphasize health protection and the prevention of diseases. Consequently, the food industry must provide an effective answer to challenges originating from the changing consumer preferences if it intends to strengthen its position on the market. First, food producers must be able to understand the consumer, their motivations and the respective factors influencing their decision making process. Producers must develop appropriate products meeting consumer needs at a proper price while identifying optimal sales channels along with selecting promotional tools capable of raising consumer awareness and facilitating the acceptance of presently still higher production costs.

The principal objective of this dissertation is to summarize and synthetize the theoretical models and impact factors related to food selection along with providing quantifiable information on consumer attitudes and decision criteria. I examine the sequence and significance of factors impacting consumer behaviour and the respective segment-based differences in connection with the functional food purchase. The research also performs a segmentation of the given consumer groups according to the criteria of health conscious selection. The specific segments will be analysed, along with exploring and modelling the given factors that influence the decision-making process.

The main objectives of the research process

1. Surveying and synthetizing of consumer behaviour models and the assessment of the adaptability of such methods for the exploration of consumers' selection activities.
2. The exploration of the market niche and various factors impacting the decision making process of health conscious consumers.
3. Segmentation of consumer groups based upon food consumption.
4. The correlation of the given segments with marketing devices to promote the accessibility and shaping of the respective consumer groups.
5. The construction of a model reflecting the decision making factors of functional food selection.

The research hypotheses

H1: Focusing on health conscious food consumption behaviour within the larger category of consumer behaviour conduct provides necessary and new information.

I propose that the examination of health conscious consumer behaviour aimed at the acquisition of healthy and functional foods according to traditional consumer conduct models is not sufficient as the decision making factors present a special pattern.

H2: Price has a significant impact on the selection of healthy products, and can distort an optimal decision.

Foods containing an ingredient generating a positive impact on one's health primarily due to the given production technology tend to be more expensive than their traditional counterparts. Thus the sensitivity of consumers to prices has to be increasingly monitored especially the extent to which it can modify selection decisions in the specific segment.

H3: Brand loyalty hinders openness towards new products, thus customers accustomed to established brands are less willing to test new products.

The exploration of the impact of brand loyalty in this product circle and market segment is crucial. Food selection is based on trust since unsafe or low quality foods can damage the consumer's health. Consequently, brand loyalty implies confidence in the given product and producer as well. Therefore, the extent of brand loyalty and its impact on consumer attitudes to new products should be further explored.

H4: People find the regularly used products convenient, thus they are reluctant to test new ones.

Consumers tend to insist on established, convenient solutions. Health consciousness, however, challenges this settled, comfortable approach as it urges the consumer to search for information, to find out about better, more innovative and potentially ideal options and make decisions based on the highest amount of available information possible. Thus the impact of convenience and/or a conscious approach on food selection decisions should be examined as well.

H5: In case of existing health problems consumers' health consciousness tends to increase and in return this leads to a need to search for more information generating a quantifiable impact on consumer behaviour.

Direct or indirect short-term or long term, chronic nutrition-related diseases urge consumers to select products whose composition facilitates the treatment or at least the lessening of the given problem. Since optimal decision-making depends on the availability of the most possible information such need leads to increased consumer awareness. Hence I assert that existing health problems motivate health conscious food selection and consumption.

H6: Highly educated consumers are more intent on searching for the necessary information facilitating optimal product selection and purchase. This segment can only be addressed and persuaded with credible and authentic information.

To a certain extent the level of the given consumer's educational background can determine the quantity and quality of available information. While there is no directly proportional relation between qualification and knowledge level, it is reasonable to presume a correlation. Thus consumers possessing more information have to make purchase-related decisions by excluding the uncertainty factors and utilizing the highest possible amount of knowledge. This also means a need for credible and authentic information.

2. THE DATA BASE AND THE APPLIED METHODS

My research effort includes secondary and primary research as well.

2.1. Secondary research: Consumer behaviour

The secondary research identified sources that facilitate the exploration of consumer attitudes, motivations, and impact factors related to healthy foods. My dissertation introduces a segment-specific consumer behaviour model with particular attention to information processing. The secondary research effort established the foundation of primary research. Hence I systemized the available consumer behaviour models and synthesised the crucial components in order to provide the foundations for the primary research.

2.2. The primary research

The primary research is divided into three stages. During the *first stage* I performed a nationwide representative survey with a sample of 1000 respondents. The questionnaire aimed at the exploration of decision preferences and the decision mechanisms related to functional foods along with the identification of theme–specific consumer segments. Having completed the analysis, I focused on the information acquisition and processing efforts of consumers. I intended to perform a detailed analysis mainly for two reasons. The spatial restrictions encountered during the first stage prevented me from performing a painstaking inquiry and this way I gained an opportunity to investigate the deficiencies identified during the first phase.

In order to broaden the scope of the examination the *second stage* included qualitative research and focus group interviews.

In the third stage I performed another survey with 500 respondents. Having utilized the respective findings, I constructed a consumer attitude model related to information processing, a theme I explored during the first stage. Furthermore, I established consumer groups according to the respective criteria.

In order to make recommendations for the use of the ideal marketing tools I examined the information processing-related behaviour of the given segments.

The main results forwarded by the dissertation:

1. I have performed a survey and a synthesis of consumer behaviour models related to the selection of foods with a health protection capability.

2. I explored the factors influencing the purchasing decisions of health conscious consumers along with examining their importance.

3. I performed consumer segmentation related to consumer attitudes toward foods with a health protection function.

4. I recommended marketing devices facilitating effective access to and influence on the relevant segments.

5. I constructed a model integrating the decision factors of conscious functional food selection.

3. THE MAIN CONCLUSIONS OF THE TREATISE

T1: The distinction of health conscious consumer behaviour within the larger category of consumer conduct provides necessary and new information.

In case of food consumption the general decision-making models including the black box or Engel-Blackwell-Miniard model can be expanded by new decision-making factors justified by the long or short term, furthermore the direct and indirect impact of nutrition on consumer health. The specific factors among them current health problems and their acceptance, the need to eliminate lifestyles harmful to one's health, the available knowledge, the willingness to search for information, the estimated profits via the conscious selection along with confidence in the product and producer coupled with authenticity and openness to innovation should be incorporated into the exploratory models of consumer attitudes and marketing programs designed to influence consumers.

T2: The price plays a significant role in choice of healthy products, that is capable of distorting or frustrating the optimal decision.

The representative inquiry has proven that in Hungary the price consciousness of consumers is a serious impact factor. 21% of the respondents refuse to pay more for a product with claimed health benefits, while almost 40% of the sample is willing to pay 1-5% more for such goods. Price conscious consumer behaviour is correlated with age as the younger generation is less concerned with the price of the products than the elderly. Therefore, younger consumers are more likely to accept the higher prices of such products.

Price conscious attitudes show a weak, yet significant correlation with marital status as well. Price conscious consumers represent an independent, or separate segment and the description or identification of their conduct, decision factors, and attitudes can be crucial to the formation of the appropriate marketing strategy.

This group maintains the most sceptical attitude toward the physiological impact of nutrition, and considers their knowledge insufficient to determine which food generates a positive impact on their health. They do not like to experiment or try new products, and dietary considerations do not significantly impact their food-related decisions.

The actual decisions are influenced by taste, price, composition, and brand name. Purchase-related information is primarily acquired during shopping and they tend to accept the opinions of family and friends concerning their food selection. This segment does not trust advertisements or Internet sources. Half of the sample does not read the product labels primarily due to lack of interest. If, however, they look at the label, they search for expiration date, price, or product-related information.

T3: Brand loyalty does not prevent willingness to try new products in the functional food category.

Brand loyalty is an important concern for a producer as the related consumer satisfaction can lead to repeated purchases. While purchasing willingness based on brand loyalty has a direct effect on sales figures and profits, such consumers are reluctant to try new products or merchandise as they insist on the familiar brands. Thus it is more difficult to persuade them to further rationalize their consumption.

While the representative survey did not reveal a strong brand loyalty, the willingness to innovate or experiment proved especially strong. Consequently, my starting hypothesis was not substantiated.

T4: The willingness to test new products prevails over the convenience of selecting regular products consumers are accustomed to.

A significant, that is, 83% of the sample was willing to test new products, thus the hypothesis can be considered substantiated. Conversely, it must be pointed out that the willingness to try new products shows inverse proportionality to age. The segment made up by Sceptics (28%) shows less trust towards the new products as compared to other segments.

T5: Existing illnesses intensify the need for health conscious food selection and the compelling need to find information generates a quantifiable impact on consumer behaviour.

The representative survey suggested that people suffering from chronic diseases are more likely to make health conscious selection decisions. Health consciousness is related to a basic health issue the consumer has to pay attention to. Accordingly, taking the guidelines of healthy nutrition or diet into consideration helps in the preservation of health status.

The segment named *Demanding conscious buyers* includes more people with chronic diseases and regular medicine use. This group is highly likely to consider food-related information during decision making.

Those who are not interested in product-related information usually do not suffer from chronic diseases.

T6: Consumers with higher qualifications or possessing a higher knowledge level show a greater willingness to search for information necessary for optimal selection of functional foods. This group can only be persuaded by authentic and credible information.

The representative survey indicates that increased levels of educational background are coupled with a higher amount of knowledge. This has an impact on nutrition-related knowledge as well. At the same time, those familiar with the term "functional food," are intent on buying food products with a healthy impact.

The second questionnaire based survey identified a greater amount of people with a higher education background in the segments named "*Health conscious shoppers,"* and "*Shoppers with limited information*."

Consumers with a higher education background do not trust information presented on the product label. This reveals an interesting paradox, namely that the members of this group more frequently search for such information, while they are less likely to believe the respective food-related statements. (Liu, Hoefkens, Verbeke, 2015). Therefore, credibility is the number one consideration in this case.

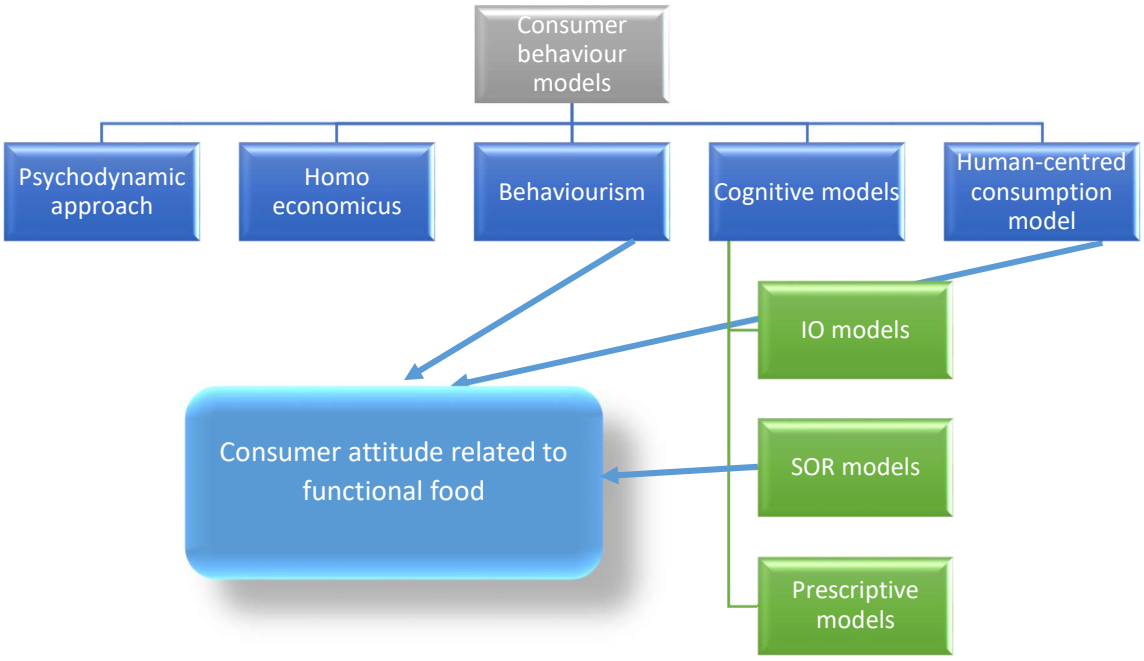
4. THE NEW OR NOVEL FINDINGS OF THE RESEARCH

4.1. The conceptualization of consumer behaviour models

One of the most important conclusions of the present research process is that consumers on the functional foods market cannot be examined with traditional methods. Consumer behaviour is influenced by special factors and the demand trends continuously change primarily due to the publication of scientific and in some cases pseudo-scientific research results along with the continuous availability of information on the social media.

Consequently, the need to control, complete, and modernise the respective research models is beyond dispute. The respective inquiry should use existing consumer behaviour models while including new criteria complemented with such primary research methods as eye cameras, flavour test, and on-site shopping observation.

As a result of studying the professional research results I mapped the main trends of consumer behaviour models coupled with the given perspectives and assertions. I have integrated the functional food-related consumer behaviour model into a system based upon the synthesised information.



4.2. The segmentation of consumers on the functional foods market

Consumer attitudes related to functional foods

"Price conscious consumers"

One quarter of the respondents represent this segment. While this category tends to be dominated by men, all age groups are represented in a similar proportion. Nevertheless, the 26-35 age group and divorced/widowed individuals are present at a higher rate. As far as residence is concerned the urban and rural population is in the majority along with households without children. Most members of the segment have a basic level of education. In this segment I find the highest proportion of people with chronic diseases requiring constant medication. The members of this sample belong to the middle class and the poorer social class. The members of this cluster mostly never or only temporarily at best pay attention to choosing healthy products. Brand loyalty is low, food selection is determined by price and sales along with presentation (size or amount of the product) and packaging. As far as expenses are concerned this group is the most sensitive to prices and price and sales-related information determines their decisional preferences.

This segment can be effectively addressed with an appropriate pricing policy and the producers' messages must be clear, concise, and understandable while emphasizing disease prevention. Furthermore, attractive, distinctive packaging with clear and intelligible information is crucial as well. In this case POS advertisements can play an important role too.

”Consumers with limited amount of information”

This segment contains women in 56% and is dominated by the 26-35 and 46-55 age group. The members of the sample are primarily married or single. Residence includes the towns and villages of the countryside while the rate of childless households is high, and the number of households with one child is somewhat lower.

Chronic diseases requiring long term medication is not characteristic of this group, and they belong to the middle class. One quarter of the segment displays brand loyalty and decision-related preferences are influenced by the composition of the given food item and its impact on one’s health. The level of price consciousness is lower than that of the previous cluster.

While this segment tends to choose products with a positive impact and selects the healthy one between two food items, awareness only minimally influences the given decision making process. In case of food safety alerts they are known to abandon the brand or product they favoured earlier.

This segment requires clear information regarding the healthy impact of the given product. While they are willing to pay a little bit higher price for a healthy product, they require a cautious price policy. The sample displays a sporadic need for food-related knowledge thus the information likely to generate the greatest influence on the respective purchasing decision is mostly related to product composition, and the visibility and noticeability of the respective data. This segment requires easy and fast access to information since regardless of product-related knowledge they are reluctant to make the extra effort for acquiring the given additional information. In addition to traditional media the segment can be addressed via on-line content as well. Therefore. one must ask whether the lack of information or insufficient knowledge contributes to declining health consciousness. Another research effort might provide answers.

"Demanding and health conscious shoppers"

The rate of women and men in this cluster is 2/3-1/3 and is dominated by the 18-35 age group. Approximately half of the respondents are married, and those residing in the capital (1/5 of the sample) and major cities are in the majority. The rate of households with two or more children is the highest in this segment, the typical education level is the completion of secondary school, but the rate of people with higher education background is substantial as well. One fourth of the cluster suffers from a chronic disease and the members belong to the upper or wealthier classes.

Characteristically this segment only sporadically chooses healthy products, they display brand loyalty and the most important considerations are price followed by composition and the healthy impact. This group can be considered the least price conscious. Marketing efforts addressed to them should include brand building, the emphasis on the prestigious aspect of the given food item, composition, and the healthy influence. Health conscious selection is based on credible and thorough information, and the identification of authentic information sources. Since the rate of young consumers is high the use of modern, interactive ICT devices and applications is recommended.

"Health conscious consumers"

This group shows the highest rate of female members. Members of this sample belong to the 26-45 age group, half of the respondents are married, one third of them single. Most respondents live in the capital and larger towns, and households without children are prevalent. While most respondents have earned their higher education degrees, the rate of secondary qualification is substantial as well. Chronic diseases are not characteristic, the sample mostly represents the middle class and the affluent layer of society.

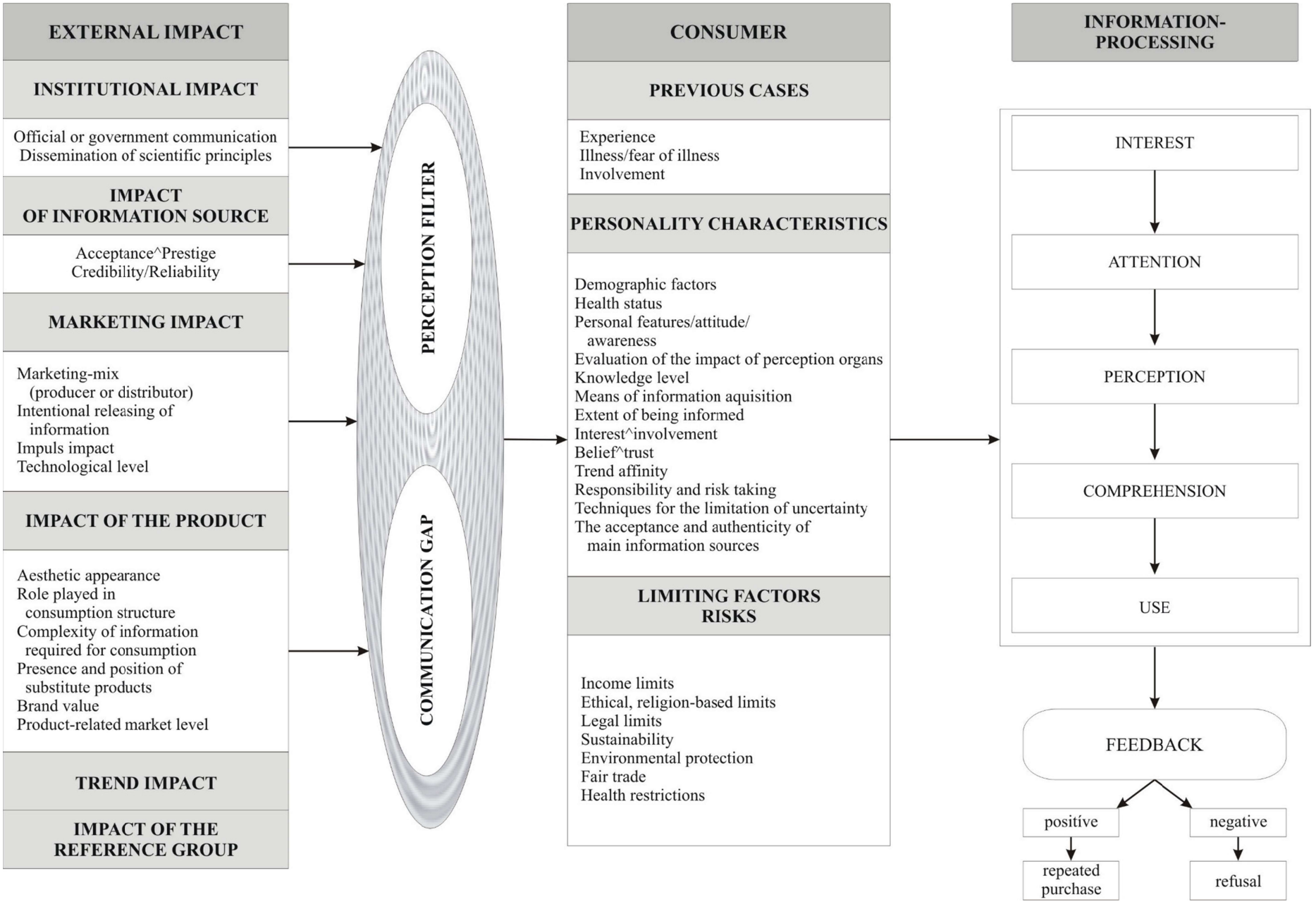
They are intent on selecting the optimal products and the respective brand loyalty is similar to that of the previous segment. Most important considerations include price, composition, and the health benefits provided by the product. Price consciousness is limited, and product purchase decisions are made according to the available relevant information. The health conscious attitude manifests in following or monitoring health and food safety related information and the respective knowledge determines whether they buy or do not purchase the given product.

Health conscious food item selection does not depend on health status, or the existence of illness along with the number of children. Educational background, in other words, the knowledge level and the single lifestyle lead to greater awareness of health related information, and the marketing messages should refer to the prestige of the given products.

Information related to composition and the respective impact on health is essential as it motivates the acceptance of higher prices. Similarly to the other groups high tech solutions can play a significant role in addressing and communicating with this consumer segment.

4.3. The information processing model of functional food consumption-related behaviour

Based upon the results of the secondary and primary inquiries I developed the given consumer behaviour model with special attention to information processing.


EXTERNAL IMPACT
INSTITUTIONAL IMPACT
Official or government communication
Dissemination of scientific principles
IMPACT OF INFORMATION SOURCE
Acceptance^Prestige
Credibility/Reliability
MARKETING IMPACT
Marketing-mix (producer or distributor)
Intentional releasing of information
Impuls impact
Technological level
IMPACT OF THE PRODUCT
Aesthetic appearance
Role played in consumption structure
Complexity of information required for consumption
Presence and position of substitute products
Brand value
Product-related market level
TREND IMPACT
IMPACT OF THE REFERENCE GROUP
PERCEPTION FILTER
COMMUNICATION GAP
CONSUMER
PREVIOUS CASES
Experience
Illness/fear of illness
Involvement
PERSONALITY CHARACTERISTICS
Demographic factors
Health status
Personal features/attitude/ awareness
Evaluation of the impact of perception organs
Knowledge level
Means of information aquisition
Extent of being informed
Interest^involvement
Belief^trust
Trend affinity
Responsibility and risk taking
Techniques for the limitation of uncertainty
The acceptance and authenticity of main information sources
LIMITING FACTORS RISKS
Income limits
Ethical, religion-based limits
Legal limits
Sustainability
Environmental protection
Fair trade
Health restrictions
INFORMATION-PROCESSING
INTEREST
ATTENTION
PERCEPTION
COMPREHENSION
USE
FEEDBACK
positive
negative
repeated purchase
refusal

5. THE PRACTICAL APPLICABILITY AND USABILITY OF THE RESULTS

The consumer behaviour model developed as a result of the research process serves as a theoretical foundation for further surveys related to functional foods and contributes to the realization of the respective research goals. The particular model and the revealed correlations coupled with the segmentation of the functional food market identifies the types and describes the main characteristics of consumers. All this will help in the development of targeted and effective marketing devices aimed at influencing the market and promoting the highest possible level of consumer satisfaction.

6. PUBLICATIONS RELATED TO THE THEME OF THE DISSERTATION

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Registry number: DEENK/364/2019.PL
Subject: PhD Publikációs Lista

Candidate: Gabriella Soós
Neptun ID: I1NTWU
Doctoral School: Károly Ihrig Doctoral School of Management and Business
MTMT ID: 10031293

List of publications related to the dissertation

Articles, studies (4)

1. **Soós, G.**, Biacs, P. Á.: The role of product-related information and factors impacting consumer attitudes during health-conscious food purchase in Hungary.
   Studies in Agricultural Economics. 120, 32-40, 2018. ISSN: 1418-2106.
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2. **Soós, G.**: A fogyasztók információ-igénye az élelmiszervásárlás során - egy fókuszcsoportos kutatás eredményei.
   Élelmiszer, Táplálkozás és Marketing. 12 (1), 33-38, 2016. ISSN: 1786-3422.
3. **Soós, G.**: A termékinformáció fogyasztói magatartást befolyásoló hatása az élelmiszervásárlás során.
   Táplálkozásmarketing. 3 (1), 73-83, 2016. EISSN: 2064-8839.
   DOI: http://dx.doi.org/10.20494/TM/3/1/6
4. **Soós, G.**, Biacs, P. Á., Kiss, A.: Fogyasztói attitűdök a funkcionális élelmiszer-fogyasztás területén.
   Élelmiszer, Táplálkozás, Marketing. 9 (1), 13-21, 2013. ISSN: 1786-3422.

List of other publications

Articles, studies (7)

5. Palotás, A., **Soós, G.**, Zsófi, Z.: Cognitive disposition to wine consumption: how the brain is wired to select the perfect bottle with a novel musical twist.
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   DOI: http://dx.doi.org/10.3389/fnins.2019.01157
   IF: 3.648 (2018)

6. Várhelyi, T., **Soós, G.**: Brand development for the promotion of cooperation between the thermal baths and the region surrounding Eger.
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7. **Soós, G.**: Business economics I. Eszterházi Károly Főiskola Líceum Kiadó, Eger, 215 p., 2015. ISBN: 9786155509537
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9. **Soós, G.**, Novotny, Á.: Resource managment in a competitive environment. Eszterházi Károly Főiskola Líceum Kiadó, Eger, 247 p., 2015. ISBN: 9786155509698
10. **Soós, G.**: Vállalatgazdaságtan I. Eszterházi Károly Főiskola Líceum Kiadó, Eger, 252 p., 2015. ISBN: 9786155509520
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Conference presentations (1)

12. **Soós, G.**, Dávid, L.: Wine Marketing - Tools for Innovation, Creativity and Sustainability.
    In: BASIQ 2015 International Conference: New Trends in Sustainable Business and Consumption. Ed.: Vasile Dinu, Bucharest University of Economic Studies, Bucharest, 473-480, 2015. ISBN: 9786013014166

Total IF of journals (all publications): 3,648
Total IF of journals (publications related to the dissertation): 0

The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of the Journal Citation Report (Impact Factor) database.

30 October, 2019

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