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SCIENTIFIC PAPER

URBAN CONSUMERS' ATTITUDE TOWARDS ORGANIC FOOD IN SRI LANKA

S H P Malkanthi
Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka

malkanthi@agri.sab.ac.lk
malkanthi09@gmail.com
ORCID ID: https://orcid.org/0000-0002-2438-9976

Abstract: *This research investigation aims to examine the urban consumers' attitude towards organic food, and the factors affecting for their attitude. A consumer survey consisting of a sample of 600 consumers was conducted, using a pre-tested questionnaire, in major cities of six main districts of Sri Lanka during November 2016 - May 2018. Data were analyzed using descriptive statistics, factor analysis, and multiple linear regression analysis. Results revealed that majority of the consumers were married females. Most of them were of 18-40 years of age category and were educated up to the GCE advanced level. The sample's monthly income ranged from Sri Lankan Rupees 58000 – 85000. Although the majority of the consumers (75.2%) were aware of organic food, only 11.5% possessed a good knowledge about them. As per the mean analysis, the consumers had a positive attitude towards most aspects of organic food. According to factor analysis, four factors (environmental factors, quality factors, health factors, and marketing factors) were extracted as they are influenced to the consumer attitude for purchasing of organic foods. Results of multiple linear regression analysis revealed a positive relationship between consumers' attitude and the extracted four factors which were based on the consumers' attitude on purchasing of organic foods. Main problems faced by consumers in buying organic food were the high price, unavailability of organic food, lack of trust, and lack of market information on organic food. It can be concluded that by providing the necessary conditions such as arranging better marketing facilities with useful market information, a continuous supply of organic foods with reasonable price levels, and enhancing consumer knowledge, will motivate the consumers to purchase more organic food. As relatively low is known about consumers' purchasing pattern of organic foods in Sri Lanka, findings of this study would be beneficial to the traders and policy makers to formulate effective strategies designed to marketing of organic foods in the country.*

Keywords: *Organic food, urban consumers, attitude, regression analysis, Sri Lanka*
(JEL Classification: *Q13*)

INTRODUCTION

Organic products can be best explained as "any product that is made or cultivated organically," and organic production can be defined as "an ecological production management system that promotes and enhances biodiversity, soil biological activity and biological cycles. Also, it is based on the minimal use of off-farm inputs and management practices that restore, maintain, and enhance ecological harmony (Winter and Davis, 2006). Organic foods do not contain pesticides or synthetic fertilizers. In conventional food, almost all products can have pesticide residues at lower or higher levels. Present-day consumers are highly concerned about agrochemicals, hormones, and medicine in animal products and genetically modified organisms (GMO), and artificial additives in fruits and vegetables (Naspetti and Zanoli, 2006; Dayasena et al., 2015). Organic fruits and vegetables have more biochemical energy to synthesize beneficial secondary plant metabolites, due to absence of pesticides and fertilizers with them (Winter and Davis, 2006).

Currently, consumption and production of organic food have gained global attention. The movement towards organic foods has increased due to the positive perception of sustainable methods of agriculture, awareness on them, conservation of the environment, and health hazards

associated with agrochemicals and consumers' preference for safer food (Singh, 2003). Attention on organic food has grown remarkably as consumers and marketers react to popular media about health and environmental effects of pesticides and food safety. The rising popularity of organic food, which is a multi-billion-dollar global industry with accelerating growth, raises important questions of interest to governments, growers, distributors, retailers, industry planners, and marketers. Growing environmental awareness, in combination with concerns about safer foods, has led people to motivate organic agricultural practices. These cause to increase demand for organic produce, which is perceived as less damaging to the environment and human health than conventionally-grown foods (Schifferstein and Ophuis, 1998; Williams and Hammit, 2001; Wijesinghe et al., 2019). Moreover, many countries have recorded a significant increase in consumption of organic food, which has become a trend in present society. Most people tend to purchase organic food than conventional food items due to health and environmental benefits (Hapuarachchi, 2016). Organic products are considered to be higher in quality compared to conventionally-produced products.

The consumer attitude plays a significant role in the buying and consumption of organic food. Chisnall (1995) defined attitude as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which is related." Grankvist, et al., (2004), pointed out that the relationship between environmentalism and consumer attitude has a strong correlation, while health consciousness also plays a vital role to shape consumer attitude and behavior (Magnusson et al., 2003). Consumers now move towards a healthy lifestyle as they realize the quality of food intake directly affects their health, and consuming organic food is a good option available to them (Pandey et al., 2019). More information about organic food market increases consumers' knowledge and positively influences consumer attitudes (Gil and Soler, 2006; Aryal et al., 2009; Briz and Ward, 2009). Organic food is often related to a specific lifestyle that includes healthy eating, vegetarianism, and alternative medicine, religious, or societal considerations (Kulikovski and Agolli, 2010; Wijesinghe et al., 2015). According to Stolz et al., (2011), positive assessments of organic production refers to 'better taste,' 'healthier,' 'no artificial additives,' 'no chemical synthetic pesticides,' 'limited use of antibiotics,' and 'no GMOs.' Increase in education level and monthly income of consumers are the other sources of motivation that positively affect the attitude towards organic food. Moreover, consumers of higher age groups increase the positive attitudes towards organic food. It notices that the consumption of organic food is seen in some consumer groups as a symbol of fashion and social status and such groups show a positive attitude towards the consumption of organic foods. It provides necessary evidences that the living area has a considerable impact on consumption of organic foods. A good evidence is that the urban dwellers have come forward for the higher level of consumption of organic foods (Agovino et al., 2017; Devid and Ardiansyah, 2017; Du et al., 2017; Joshi and Rahman, 2017; Lian, 2017; Asif et al., 2018; Hansen et al, 2018).

Kruse (2015) revealed that unsafe food could lead to various health problems, with continually emerging new threats to food safety, and food that contains harmful chemical substances is responsible for more than 200 diseases. According to Suprapto and Wijaya in 2012, healthy lifestyle is a good predictor for the attitude toward organic food, while the attitude toward organic food directly influences the purchase intention of them. Most people in the present society tend to purchase organic food due to health and environmental benefits (Wijesinghe et al., 2015; Hapuarachchi, 2016). Today, consumers tend to control food production processes more tightly and question the reliability and health impacts of conventionally produced foods. The production processes of organic foods, such as certification, labeling and inspection are noticed by consumers. As they have adequate information about organic foods, it creates a positive attitude in consumer minds towards them. Therefore, we can speak of a positive correlation between purchasing intention and existing knowledge on organic food with the consumers. The general assessments were highlighted about the effect of purchase intention of organic foods. Therefore, those who are willing to act according to social norms, cause to direct their norms according to the social sensitivity towards organic products. Similarly, having adequate knowledge on organic food has improved the ability to control the perceived behavior of consumers (Devid and Ardiansyah, 2017; Du et al., 2017; Joshi and Rahman, 2017; Kumar et al., 2017; Oroian et al., 2017; Asif et al., 2018).

Investigating consumer attitude helps in many aspects. There is a continuous change in the living standards, fashions, technology, and food habits of the consumers. Therefore, consumer attitude towards purchasing of products from the market was different from person to person (Kumar et al., 2004). According to the literature, a person's attitude has a significant effect on purchase intension. Attitude measurement is necessary to identify how marketing strategies and advertisements influence consumer behavior. New products emerging in the market or existing product's future demand can be predicted by measuring consumer attitude (Blackwell et al., 2006).

Sri Lankan context provides evidence for a few studies related to consumer attitude towards organic food. Wijesinghe et al. (2015) reveal that health concerned and environmentally conscious consumers show positive price premium for organic fruits. Jayasuriya (2016) highlights a higher demand in society for a healthy meal. Consumers of all age categories in Sri Lanka, prefer to buy healthy meals. However, its unavailability keeps them away from these choices. Consumers buy healthy meals despite their taste if they have the option to select between a healthy and unhealthy meal. Hapuarachchi (2016) stated that organically processed food had increased attraction and interest of customers within Sri Lanka. This study further

concluded that, health consciousness and environmental concern are influential factors in generating a positive attitude toward organic foods by consumers. According to Weerasiri and Koththagoda (2017), consumer attitudes affect the consumption of organic products and factors such as health concern, consumer knowledge, and product quality have significant positive relationships with an attitude leading to positive purchase intentions of the organic food. Kodithuwakku (2018) also revealed that the perception of consumers is crucial in the purchase decision of organic food consumption as it determines their consumption and intention to buy organic food products.

Consumers who are conscious of health and food safety are more driven towards buying organic food products from the organic food markets in Sri Lanka. However, the demand for organic foods has not fulfilled the supply quantity of them. Atapattu and Wijesinghe (2018) indicated that, organic food users have positive attitude towards organic food compared with non-users; yet, despite the significant level of health hazards and environmental issues with the use of agrochemicals. Compare to developed countries, still the consumption of organic food is at a lower level in the country (Malkanthi et al. 2019). However, all these researches are micro-level research, based on one or two districts or covering few divisional secretariat divisions within a district with small samples. It is difficult to find literature of research covering the populous regions with larger samples of consumers.

Therefore, the primary research objective of this study was to assess the urban consumers' knowledge and attitude on organic food. The specific objectives were to find out the socio-economic factors of urban consumers, evaluating consumers' knowledge about organic food, study the present pattern of buying organic food, identify the factors affecting consumers' attitude towards organic food, determine the relationship between those factors and consumers' attitude towards organic food, and identify the problems related to buying organic food by the consumers.

RESEARCH METHOD

This study was conducted in the capital cities of six districts (Rathnapura, Colombo, Gampaha, Kandy, Kurunegala, and Galle) in Sri Lanka. Capital cities of these districts were purposively selected for the study, as there is a potential for the presence of organic food markets and organic consumers. Four super markets were randomly selected from each city, and the target group was obtained by contacting customers who came out of the market, after buying goods. Questions were asked from customers who were willing to answer the questionnaire. The data were collected at 24 super markets as 4 markets from each city and 25 consumers from each market. So that, 600 customers were randomly selected as the sample of the study, having 100 from each city. Data were collected in two stages: Firstly, data were collected using an online survey for the pilot study (Study One) using ten consumers in September 2016. And also, necessary corrections were made before the market survey. Subsequently, a market survey was conducted using the pre-tested questionnaire (Study Two) in those six cities during November 2016 - May 2017. In the questionnaire, questions were there to gather information related to socio-economic characteristics and knowledge about organic food, their attitude towards organic food and issues and challenges in buying organic food. According to the literature, Chen & Lubo (2012) have conducted study about the consumer attitudes towards organic foods in urban china. They have reported that, product related, regulatory related and lifestyle related factors are directly or indirectly influence to the consumer attitudes or buying behavior towards organic foods. Content of the above three factors are approximately equal to the content of environmental, quality, health and marketing factors used in this study. Data analysis was conducted using four statistical techniques. Descriptive statistics (frequency analysis, percentages) were used to evaluate the socio economic factors of the consumers. Mean analysis was applied to assess the consumers' attitude towards organic food using sixteen attitudinal statements with 5-point Likert scale. The total score and mean score for each statement were subsequently calculated using the following equations:

Total score = 5xSA+4xA+3xU+2xDA+1xSDA
Mean score =5xSA+4xA+3xU+2xDA+1xSDA÷600

Where,
SA= Respondents expressing their attitude 'Strongly Agree' for the statements
A= Respondents expressing their attitude 'Agree' for the statements
U= Respondents expressing their attitude 'Undecided' for the statements
DA= Respondents expressing their attitude 'Disagree' for the statements
SDA= Respondents expressing their attitude 'Strongly Disagree' for the statements

The overall attitude of all consumers for each statement was obtained based on the cut-off values. This method is similar to the analysis method used by Ruedas (2012) to measure the attitude towards organic food. The factor analysis was also used to extract the factors affecting consumers' attitudes on organic food. Finally, the impact of environmental, quality, health and marketing factors for the consumer attitude was analyzed by multiple linear regression. Data analysis utilized the SPSS-21 Statistical Package.

RESULTS AND DISCUSSION

Socio economic characteristics of consumers

Important socio economic characteristics of the consumers, i.e., gender, age, marital status, education level, and the total monthly income of them were identified and studied within the real situations. Table 1 presents the relevant results.

Table 1. Socio economic characteristics of consumers (n=600)

Factor	Category	Frequency	Percentage
Gender	Male	282	47.0
	Female	318	53.0
Age	18-40 Years	295	49.2
	41-60 Years	272	45.3
	> 60 Years	33	05.5
Marital status	Married	471	79.0
	Unmarried	122	21.0
	Other	07	01.2
Educational level	Primary Education (up to grade 5)	10	01.7
	GCE O/L (up to grade 10)	45	07.5
	GCE A/L (up to grade 13)	237	39.5
	Diploma	59	09.8
	Graduate	212	35.3
	Postgraduate	37	06.2
Monthly total income (LKR)	Less than 23000	15	02.5
	23000-40000	135	22.5
	40001-58000	102	17.0
	58001-85000	176	29.3
	85001-162000	136	22.7
	more than 162000	36	06.0

Source: Consumer Survey, 2016-2018

As per Table 1, majority of the consumers was females (53.3%), primarily within the age category of 18-40 years (49.2%). Also, most of them were married (79.0%) and have received education up to GCE Advance level or 13 years of education (39.5%). Monthly income of the majority was in between Sri Lankan Rupees 58000-85000 (approximately US dollars 323 – 473). It is clear that they were young to middle aged people with comparatively better level of education and also in the category of a higher level of monthly income. In Sri Lankan households, women do shopping and household purchases than men. Wijesinghe et al. (2019) reported a similar socio economic profile in their study on constructing a household profile with the likelihood of purchasing organically grown produces. Vukasovic (2016) reported that, organic buyers tend to be younger and higher educated people than those who do not buy them. Similarly, below 40 years age group consumers have higher trend to purchase organic foods in Sri Lanka. And also, findings of this study noticed that consumers having lower educational level (Primary Education or education up to grade 5 and GCE Ordinary level or education up to grade 10, tend to lower consumption of organic foods.

Consumers' knowledge on organic food

In order to assess the level of knowledge on organic food, consumers were asked to mark their responses under four options as "I don't know about organic food", "I have little knowledge about organic food", "I have certain knowledge about organic food" and "I have good knowledge of organic food". Table 2 presents their responses.

Table 2. Consumers' level of knowledge on organic foods (n=600)

Level of knowledge	Frequency	Percentage
I don't know about organic food	12	02.0
I have little knowledge about organic food	19	03.2
I have certain knowledge about organic food	451	75.2
I have good knowledge about organic food	118	19.6

Source: Consumer Survey, 2016-2018

According to Table 2, a majority of the consumers (75.2%) possessed a certain level of knowledge on organic food. However, about one-fifth of the consumers (19.6%) had good knowledge. As consumers have a sufficient level of education, they can obtain knowledge on organic food in different ways. They receive that knowledge mainly from market information, internet, and newspapers. According to the study findings of the Muhammad et al., 2016, knowledge about organic food is create a considerable impact with selected socio demographic factors such as gender, nationality, and education as well as income, occupation and age.

Purchasing pattern of organic food by the consumers

Purchasing pattern of consumers was investigated using a few questions. Table 3 provides these questions and relevant answers.

Table 3. Purchasing pattern of organic food by consumers (n=600)

Question	Frequency	Percentage
Have you ever purchased organic foods?		
Yes	534	89.0
No	42	07.0
Not responded	24	04.0
For how long have you been purchasing?		
For a few months	56	10.5
Less than a year	96	18.0
Less than 2 years	126	23.5
2-3 years	135	25.3
More than 3 years	121	22.7
Do you purchase continuously or rarely?		
Continuously	126	21.0
Rarely	408	68.0
Do you like to purchase organic food in the future?		
Yes	554	92.7
No	030	05.0
Not responded	014	02.3

Source: Consumer Survey, 2016-2018

According to Table 3, a majority (89%) has purchased organic food and also 25.3% of them have been purchasing organic food since 2-3 years. However, many (68%) have been purchasing organic food rarely due to some existing constraints. Furthermore, discussions with the consumers indicated that, most of them prefer to buy organic food in the future, when they are available often and at a lesser price.

Consumers' attitude towards organic foods

Here, 16 attitudinal statements which were developed using literature and the existing information were tested against 5-point Likert scale, in order to analyze the consumers' attitude towards organic food. The total score and mean score for each statement were calculated. Finally, overall attitude of all consumers, for each statement was obtained based on the cut-off values mentioned at the end of the Table 4.

Table 4. Consumers' attitude towards organic food (n=600)

No.	Statement	SA	A	U	DA	SDA	Total score	Mean score	Overall Attitude**
01	Organic food has high nutrition	342	216	26	10	6	2678	4.46	A
02	Organic food has good taste	269	257	62	10	2	2581	4.30	A
03	Organic food has good smell	219	248	116	12	5	2464	4.11	A
04	Organic food has high quality	341	207	39	7	6	2670	4.45	A
05	Organic food have no harmful effects	236	232	105	18	9	2468	4.11	A
06	Organic food are good for health	338	232	22	04	04	2696	4.49	A
07	Organic food has no pesticide residues	203	242	115	21	18	2388	3.99	A
08	Organic food protect the environment	119	274	138	46	23	2220	3.70	A
09	Organic food are good for environment	323	237	29	6	41	2583	4.45	A
10	I trust organic labels	56	195	189	117	43	1904	3.17	U
11	I consider organic brand name/s	71	188	177	121	43	1923	3.21	U
12	Organic labels mean high-quality food	63	188	215	98	36	1944	3.24	U
13	I buy only the organic food which have certifications	143	151	72	129	105	1898	3.16	U
14	I buy organic food whenever possible	290	242	42	17	43	2388	4.31	A
15	Organic food need to be easily accessible	243	256	71	22	8	2504	4.20	A
16	I buy organic food whenever I feel, I like it	128	232	140	83	17	2171	3.20	U

Source: Consumer Survey, 2016-2018

*cutoff values for different attitudinal levels;
1.00-1.49 = strongly disagree; 1.50-2.49 = disagree; 2.50 - 3.49 = undecided; 3.50 - 4.49 = agree and 4.50 - 5.00 = strongly agree

As per Table 4, out of the 16 statements, consumers agreed with 11 statements and were neutral for 05 statements. These 11 statements were identified as the factors which are highly influenced the consumers attitude when purchasing of organic foods. It is evident that consumers have a clear idea of organic food. According to the results, consumers agreed with the statements regarding quality factors (statements 01, 02, 03, and 04) of organic food. Also, most consumers agreed with the three statements (statement 05, 06, and 07) relating to health factors. Therefore, health-related factors and quality factors of organic food have significant impacts on consumers' attitude. Consumers also perceived organic food as good for the environment (statements 08 and 09), thereby agreeing with the findings of Kodithuwakku (2018), which stated that consumers severely consider organic food is for healthier consumption, and safety is a significant factor that influences consumer attitude. Findings also denote consumers' willingness to buy organic food, because of environment friendliness. Karunadasa and Weerasiri (2017) indicated that health consciousness, environmental consciousness, consumer knowledge, and personal norms positively affect the consumer attitude towards organic food. Apart from these factors, the availability of organic food in the market (statements 14 and 15) positively affects consumer attitude towards organic food. However, dearth of market information (availability, price, trustworthiness, continuity of organic food) and lack of organic food certification procedures, lead consumers to face difficulties in getting decisions about buying those products. Furthermore, they have less trust on organic

certifications (statement 13) and some organic labels (statements 10, 11, and 12) in the market at present. As per Piyasiri and Ariyawardhana (2002), consumers who were willing to buy organic products from markets consider certifications to assure the quality of products. Therefore, producers and marketers need to pay attention on correct certification and labeling of their organic products. Statement number 16 showed that, even though the consumers have a better feeling to buy organic foods, some limitations such as, higher price compare to non-organic foods, poor labeling and certification etc are negatively affect for it.

Factors influencing consumers' attitudes on organic food

Factor analysis was conducted to identify the factors influencing consumers' attitude towards organic food. Before the study, KMO and Bartlett's test was conducted to check the suitability of the data for factor analysis. Table 5 presents the result of the KMO and Bartlett's test.

Table 5. KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.798
Bartlett's Test of Sphericity	Approx. Chi-Square	5872.706
	Df	120
	Sig.	.000

According to the KMO and Bartlett's test, the KMO value is 0.798. This value is suitable for preceding the factor analysis (Table 5). Furthermore, the p-value is less than 0.05 in this Bartlett's test, and hence, signifies the suitability of data for factor analysis. Therefore, factor analysis was conducted, and Table 6 presents the results.

Table 6. Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.681	29.253	29.253	4.681	29.253	29.253
2	2.365	14.779	44.032	2.365	14.779	44.032
3	1.753	10.958	54.990	1.753	10.958	54.990
4	1.010	6.315	61.306	1.010	6.315	61.306
5	.882	5.513	66.819			
6	.868	5.426	72.244			
7	.727	4.541	76.785			
8	.645	4.033	80.818			
9	.616	3.849	84.667			
10	.583	3.644	88.311			
11	.465	2.906	91.216			
12	.401	2.507	93.723			
13	.376	2.348	96.071			
14	.353	2.209	98.280			
15	.272	1.702	99.982			
16	.003	.018	100.000			

According to the total variance explained, it only considered the extracted sums of squared loading (Table 6). Here, the factor accounted for 29.253% of the variance, the second 14.779%, the third 10.958%, and the fourth 6.315% of the variance. All remaining factors are not significant.

Table 7. Component matrix

Rotated Component Matrixa				
	Component			
	1	2	3	4
Good for environment	.901	.133	.208	
Protect the environment	.899	.131	.209	
Buy organic food when easily accessible	.675			
Organic food has no pesticides residuals	.522		.459	
Organic food are more tasty	.166	.869		
Organic food have good smell		.785	.198	.249
Organic food are highly nutritious	.151	.761	.301	
Organic food have high quality	.146	.622	.428	
Organic food have no harmful effects		.130	.783	.165
Organic food are good for health	.227	.420	.594	
I buy organic food whenever available	.218	.254	.564	.109
I Buy organic food whenever I feel I like it		.221	.433	.231
I trust organic food labels	.117			.810
Organic labels indicate high-quality food	-.234	.129	.149	.800
I consider organic food brand name/s	.435	.105	-.131	.645
I buy organic food which only have certifications	-.157		.174	.480

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

Four factors were extracted according to the rotated component matrix as shown in Table 7. The first factor was named as environmental factors, and it describes 29.253% of the total variance. The second factor was named as quality factors, which describes 14.779% of the total variance. The third was the health factors that described 10.958 % of the total variance, while the fourth factor was named as marketing factors, and it explained about 6.315 % of the total variance. Rizaimy et al. (2010) used a similar method in their study to identify factors affecting consumers to purchase organic food. Results indicated that consumers buy organic food products considering health consciousness and perceived value.

Determination of the relationship between the extracted factors and urban consumers' attitude towards organic food

Influence of the extracted factors on the consumers' attitude towards organic food was measured using multiple linear regression analysis. The resultant factor scores (independent variable) were regressed against the dependent variable which are denoted as consumer attitude for purchasing of organic foods (means of attitude).

Hypotheses used in the study were as follows:

$H_0$1: There is no relationship between environmental factors and consumers' attitude towards organic food

$H_0$2: There is no relationship between quality factors and consumers' attitude towards organic food

$H_0$3: There is no relationship between health factors and consumers' attitude towards organic food

$H_0$4: There is no relationship between marketing factors and consumers' attitude towards organic food

Table 8. Results of multiple linear regression analysis (n=600)

	Beta coefficient	t	Sig.	Hypothesis H0
Environmental	.229	103.052	.000	Reject *
Quality factors	.245	110.014	.000	Reject *
Health factors	.248	111.489	.000	Reject *
Marketing factors	.232	104.273	.000	Reject *

*adjusted R2 = 0.987, standard error=0.05440, significant at 95% confidence level

Table 8 presents the multiple linear regression model summary and over fit statistics. The results of multiple linear regression analysis provided supportive evidence to prove the factors affecting consumers' attitude towards organic food. The adjusted R square value was 0.987, and p values of all variables were lower than 0.05 at 95% confidence level (significant), which meant that the null hypotheses were rejected. Therefore, environmental factors, quality factors, health factors, and marketing factors were significantly associated with consumers' attitude towards organic foods. The results indicated positive relationships between consumers' attitude and the above four factors. It further revealed that,

- For every unit increase in environmental factors, attitude is predicted to be 0.229 units higher.
- For every unit increase in quality factors, attitude is predicted to be 0.245 units higher.
- For every unit increase in health factors, attitude is predicted to be 0.248 units higher.
- For every unit increase in marketing factors, attitude is predicted to be 0.232 units higher.

Various other researchers have reported more or less similar findings. For instance, Bashaa et al. (2015) discovered that motivations behind consumers for buying organic food products are health and environment concerns, lifestyle, food product quality, and their subjective norms. Ramesh and Divya (2015) also reported that health, taste, and packaging are the factors influencing consumers to buy organic food products.

Constraints for buying organic food by the consumers

Finding of the constraints associated with buying organic food by the consumers is a timely requirement. Thus, constraints affecting the organic food purchasing by the consumers were studied in detail and presented in Table 9.

Table 9. Constraints in buying organic food (n=600)

Constraint	Frequency	Percentage*
Organic foods are expensive	516	86%
Unavailability of organic foods in the market	492	82%
Discontinuous supply in the market	474	79%
Lack of trust about organic foods	438	73%
Lack of certification for organic foods	414	69%
Unavailability of market information about organic foods	384	64%

Source: Consumer Survey 2016-2018

*This is a multiple response question; one respondent can have more than one option. Therefore, the cumulative percentage could be higher than 100%.

According to Table 9, the primary constraint in buying organic food was the high price of them. Unavailability of them and discontinuous supply were also serious problems. Unavailability of organic food in the market leads to irregular purchasing and consumption patterns. The absence of a clear and direct market flow from farmers to market places results in a discontinuous supply of organic food. The results indicated that consumers' have less trustworthiness about organic food.

Vukasovic, 2016 mentioned that lack of consumers' trust, higher price levels and lack of market information were the major constrains of buying organic foods. Furthermore, in 2017, Asli et al. reported similar problems in their study on factors limiting the potential impacts of organic agriculture on rural development in China. These constraints make limited consumer preference for buying organic food. Therefore, the transparency of information about the marketing of organic food is needed for the long-term retention of loyal consumers. Hence, the establishment of proper certification methods for organic food is highly important.

CONCLUSIONS

Many conclusions can be drawn based on the study findings. As per the socio economic factors of consumers', more than half of the consumers are females and the majority of the consumers

are in the young to middle-aged categories and with families. While most consumers have a significant level of education, majority of them have a comparatively higher monthly income (the average household income per month was Rs. 62,237 in 2016 in Sri Lanka). At present, most middle- and high-income receiving people in the country, principally do their shopping in supermarkets. Based on the information gathered in discussion with consumers, especially educated women are more conscious about the food given to their children and family as they are important to avoid health problems.

Most of the consumers have a significant level of knowledge of organic food, while about one-fifth of them have good knowledge. As these consumers have a good education level, they are exposed to various sources of information such as the internet, newspapers, and television and receive the latest news on currently important information.

Gradual development in purchasing of organic food can be seen as per the purchasing pattern of organic food is concerned. The expansion of supermarket channels in main cities in the country during the last 3-4 years have provided access for organic food for the consumers, and at present, the demand exists for organic food by the educated, high-income earning category of the consumers.

Consumers have a positive attitude towards beneficial aspects of organic food such as food quality (taste, smell, quality, and nutrition) and the health-enhancing and environment protecting ability. However, they are not satisfied with the marketing aspects of organic products. Therefore, these areas need improvement to attract more consumers towards organic food.

As per the factor analysis, four factors, i.e., environmental factors, quality factors, health factors, and marketing factors of organic food are important directly and also indirectly for purchasing of organic foods. According to multiple linear regression analysis, those four factors are positively associated with consumers' attitude towards organic foods.

In focusing the problems associated with purchasing of organic food by the consumers, high price, unavailability of goods, and lack of continuous supply are the main ones. Issues related to the trust of organic products, certification systems, and lack of sufficient market information are also critical and need remedies.

RECOMMENDATIONS

This research study can make some recommendations to attract more consumers towards organic food in order to improve the marketing of organic food in the country.

Even though certain arrangements have been made regarding the selling of organic food in some markets, these facilities need to be formalized by maintaining a continuous supply of oganic food at various quantities, considering the demands of different types of consumers, in an attractive manner. It will be beneficial to mention useful information such as the nutrition composition, health benefits, and the method of preparation on the packet to facilitate consumers, and selling organic food at reasonable prices without charging higher rates.

Since the consumers have a positive attitude on organic food, demand for organic food will be increased in future. Organic food producers should produce them properly, harvest them at the correct time without destroying the nutritional value and freshness, and certify the food items using accurate certification systems and labeling. These foods should be transported to the relevant markets in regular time duration at reasonable prices.

The government should arrange many promotional programs such as exhibitions, advertising, and poster displays, highlighting the benefits of organic food products such as health and eco-friendly qualities to further encourage consumers towards purchasing organic food products. Programs for school children and their food based on organic food could be a better way to maintain the good health of the younger generation.

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Applied Studies in Agribusiness and Commerce – APSTRACT
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SCIENTIFIC PAPER

WILLINGNESS TO PAY FOR LOCALLY PRODUCED ORGANIC FOODS BY URBAN CONSUMERS IN SRI LANKA

S H P Malkanthi
Department of Agribusiness Management, Faculty of Agricultural Sciences,
Sabaragamuwa University of Sri Lanka

malkanthi@agri.sab.ac.lk
malkanthi09@gmail.com

Abstract: *Organic food consumption is gradually increasing among Sri Lankan consumers due to an increased awareness on healthy food. Some consumers ready to pay more for organic food, but it varies according to many factors. Therefore, the main objective of this study was to evaluate the urban consumers' willingness to pay (WTP) for organically produced food in Sri Lanka. The specific objectives of the research were to investigate the socio-economic factors, the level of awareness on organic food, the present situation of buying, and the level of additional price ready to pay and analyze the impact of socio-economic factors on consumers' willingness to pay. The research was conducted in urban Sri Lanka, covering capital cities of six urban districts of the country; Colombo, Galle, Gampaha, Kandy, Kurunegala, and Rathnapura. Data were collected from November 2016 to May 2018, from 600 consumers, by selecting 100 consumers per city. Data analyses employed were a descriptive analysis and binary logistic regression. Results revealed that, the most of the consumers were females, married, and with a comparatively higher level of education and monthly income. Most consumers had a significant level of awareness about organic food. A lesser proportion of consumers (24%) buys organic food at present, while the majority (52.4%) was willing to pay an extra price. Out of these consumers, the highest percentage (29.3%) prefers to pay 26% to 50% premium prices. As per the results of logistic regression, age, gender, monthly income, and education were the deciding factors for consumers' willingness to pay a premium price for organic food. Results of this research are helpful for the development of production and marketing strategies and awareness programs for urban consumers on local organic food products.*

Keywords: *Local organic food, willingness to pay, urban consumer, organic market, Sri Lanka.*
(JEL Classification: *Q1, Q13*)

INTRODUCTION

Organic food can be described as the food that is grown, and stored or processed without using chemical fertilizers or harmful agrochemical such as pesticides, herbicides, growth hormones, and generic modification (Essoussi and Zahaf, 2008). According to the Food and Agriculture Organization (FAO) (2007), organic food should only use organic production methods and management practices which need to achieve sustainable productivity. Thus, it uses pest, weed, and disease control methods along with a different mixture of mutually dependent life forms, recycling plant and animal remains, water management practices, crop rotation and selection, and tillage and cultivation.

The use of organic food has increased rapidly, in developed as well as developing countries. The rising purchasing pattern causes for the increasing level of consumer awareness on food safety and health concerns. Many reasons are contributing to this organic food market trend. Most consumers believe that organic food can provide individual and social values for themselves and also their families. Health factor composed of environmental and animal welfare factors is one of the most significant reasons for choosing organic food. The rapid development in organic food markets has created high interest among consumers, researchers, and businessmen although it comprises a small percentage of the food market.

Organic food is becoming popular with creating a growing market segment for the consumers who are ready to pay a

premium price for them. The premium price is the extra cost charged on organic food over conventional food (Shafie and Rennie, 2012). Nonetheless, consumers prefer to pay an additional payment due to health concerns and other values of organic food. The purchasing decision of consumers often depends on different aspects such as knowledge, intention, and attitude. Knowledge on products and their advantages effects consumers' WTP for organic products and the level knowledge of them depend on the information available for them.

Findings of many researches have reported the premium price that organic food consumers are ready to pay. The most of researchers in USA and European Union have shown that the consumers are ready to do an extra payment of 10 - 40% for organically grown products. Yiridoe et al. (2005) observed that, the demand for organic products depend more on the price difference between organic and conventional food than the actual price of organic food. Research in Croatia revealed that, the most of consumers are ready to pay a premium price of 11-20% (Radman 2005). According to a study in Iran on WTP for organically grown products, most consumers were ready to pay a premium price for organic products in different levels. While 55% willing to pay premium price between 5 to 24%, 10% were willing to pay higher than 35% for organic food than conventional food (Haghiou et al., 2013).

In London, most of the households were ready to pay premium prices for organic goods Griffrith and Nesheim (2008), while in Spain, only real organic food consumers indicated a positive attitude on organic food and they were ready to pay a premium price for organic food (Gil, 2000). As per Rodríguez et al., (2007), in Argentina, a positive attitude exists on organic products, and consumers are willing to pay premium prices to acquire good quality products.

The study conducted by Aryal et al., (2009) reported that, 28% of the consumers considered in the study were ready to pay up to 20% Premium price compared with conventional food. Furthermore, 13% of them were ready to pay premium price in between 20-50%. However, 59% of them were not ready to pay more than a 10% premium price for organic food. Asadi et al., (2009) revealed that, most of consumers in Iran were not ready to pay a premium price above 20%. Furthermore, Millock et al., (2002) recorded that, while 35% of consumers in Denmark were willing to pay a premium price for organic food, 18% of them were not ready to pay for any kind of premium price.

According to Joyce et al., (2011), 89% of the consumers in Tanzania knew about of organic food. Most of them were with high income, older, and educated categories. The majority of them (83%) have noted a taste difference between conventional and organic foods. Also, the majority of them (87%) were ready to buy organic food, while 78% of them were willing to pay an extra price for organic food. Moreover, majority of them (86%) like to experience home delivery of organic food. Based on a research study, Muhammad et al., (2015) reported that consumers' willingness to pay for organic food is affected by their socio economic factors like age, education, nationality, household size, and monthly income. Nationality is a new variable that influences consumers' willingness to pay for organic food.

In Asian countries, the demand for organic food has grown by 15 to 20% per annum during the last decade (Helga and Lukas, 2009; Mohamed et al., 2014). According to research findings of Aryal et al., (2009), the majority of consumers (90%) in Kathmandu valley are aware of organic products, but awareness of consumers differs according to the diverse characteristics of consumers. The study also revealed that, around 42% of the respondents selected organic vegetables as their best choice, and only 10% of consumers favored organic rice as their best choice. The principle reasons for their preferences were health (75%), palatability & taste (18%), and freshness and good appearance (7%). The study of Gumber and Rana, (2017) in India reported that, consumer characteristics such as education and income level have positively influenced the WTP premium price for organic food.

In Sri Lankan context, the study on "consumer WTP for selected organic vegetables in Kandy district" has revealed that, most respondents were aware of organic products and it has influenced the consumption of organic food. Besides, the income of the household, years of education has significantly affected on WTP for organic products. According to Piyasiri and Ariyawardana (2002), the majority of consumers consider price as a significant factor. Therefore, the price of organic food should be as much as competitive with conventional foods. Also, some consumers prefer to have organic food with suitable packaging.

The organic food market depends on consumer demand. The number of people who are ready to pay an extra price is gradually increasing. Accordingly, a consumer-oriented approach to understand the market is worth for organic food marketing. Hence, the broad objective of this study was to evaluate the consumers' willingness to pay for organic food in urban Sri Lanka. The specific objectives were the understanding of the socio-economic characteristics of urban consumers, assessment of the level of consumer awareness on organic food, identification of consumers' WTP premium price for organic, determination of the impact of socio-economic factors on consumers' willingness to pay for organic food, and identifying the challenges associated with purchasing of organic food by the consumers.

RESEARCH METHODOLOGY

Research methodology is the process through which researchers want to conduct their research. It displays the way through which these researchers formulate their research problem and objective, plan to careful, systematic collect and analysis required data and present their result obtained during the study period. It helps to find solutions to a question or recognize a particular phenomenon correctly by going beyond personal experience, thought, feelings and opinion (Johnston 2010).

Accordingly, this study was carried out in capital cities of six districts (Rathnapura, Colombo, Gampaha, Kandy, Kurunegala, and Galle) of Sri Lanka. The main cities of these districts were selected purposively for the study due

to their potential for the presence of organic markets and organic consumers. Four super markets were randomly selected from each city, and the target group was obtained from 25 customers came out from the super market after buying goods. Questionnaires were filled from the customers who were willing to participate in the survey. Data collection was done at 24 super markets (04 super markets from each city), and the sample size was 600 customers (100 from each city). Data were collected in two stages: First, via an online survey for the pilot study (Study one) using ten consumers in September 2016, and then, a consumer survey using the pre-tested questionnaire (Study two) in the selected six cities from November 2016 to May 2018. In the questionnaire, consumers were asked information related to socio-economic characteristics, awareness level related to organic food, information related to the present situation of buying organic food, WTP for organic food, and challenges in purchasing organic food. In data analysis, socio-economic characteristics, the level of awareness, information related to present situation of buying organic food, WTP for organic food, and challenges in purchasing organic food were analyzed using descriptive statistics (frequency analysis, percentages), while factors affecting consumers' WTP premium price was measured using binary logistic regression analysis. Data analysis was conducted using the SPSS software version 21. Table 1 presents the variables applied in binary logistics regression.

Table 1. Variables used in the binary logistic regression analysis

Variable	Measurement	
Dependent variable	WTP premium price	No (0) Yes (1) Not responded (2) Later, these three levels were converted into two levels as 1 for 'yes' and 0 for both 'no' and 'not responded.'
Independent variables	Age	Years
	Gender	Female (1), Male (0)
	Marital status	Married (1), Unmarried (0)
	Educational level	Low (0) Middle (1) High (2)
	Monthly income	Low (0) Middle (1) High (2)

RESULTS AND DISCUSSION

Results of the study are presented in five sections. They are arranged as (1) socio-economic characteristics of consumers, (2) level of consumer awareness, (3) present situation of buying and WTP for organic food, (4) factors affecting for WTP for organic food, and (5) challenges faced by consumers when they purchase organic food at the market.

Socio-economic characteristics of consumers

Socio-economic characteristics of the target group reflect lots of information about them. Therefore, useful information related to the consumers' gender, age, educational level, marital status, and monthly income were discussed to understand the socio-economic characteristics of urban organic food consumers. Table 2 provides the research findings.

Table 2. Socio- economic characteristics of urban consumers (n=600)

Factor	Category		Frequency	Percentage
Gender	Male		282	47.0
	Female		318	53.0
Age	18-40 Years		295	49.2
	41-60 Years		272	45.3
	> 60 Years		033	05.5
Marital status	Married		471	79.0
	Unmarried		122	21.0
	Other		007	01.2
Educational level	Primary education	Low	10	01.7
	O/L		45	07.5
	A/L	Medium	237	39.5
	Diploma		59	09.8
	Graduate	High	212	35.3
	Postgraduate		37	06.2
Monthly income (LKR)	Less than 23000	Low	015	02.5
	23000 - 40000		135	22.5
	40001 - 58000	Medium	102	17.0
	58001-85000		176	29.3
	85001 - 162000	High	136	22.7
	more than 162000		036	06.0

Source: Consumer survey 2016-2018

According to Table 2, majority of respondents were females (53.0%), and many respondents (49.2%) belonged to the age category of 18-40 years. Most of them (79.0%) were married, have received education (39.5%) up to the GCE advanced level (A/L), and the respondents' monthly income ranged Sri Lankan rupees 58000-85000 (approximately US dollars 323 – 473) . Therefore, the majority of respondents were middle-age consumers having a comparatively better level of education and monthly income. In Sri Lanka, frequently, women do the shopping and find healthy food for their families, since the female gets the priority in household purchases than men. Usually, women visit to the markets after their work to buy necessary food items for their families.

Consumers' awareness of organic food

Level of consumers' awareness on organic food was identified according to the consumers' point-of-view using four statements. Table 3 presents the results.

Table 3. Consumers' awareness of organic food (n=600)

Awareness level	Frequency	Percentage
I am not aware of organic food	12	2.0
I have a little level of awareness about organic food	20	3.3
I have a moderate level of awareness about organic food	451	75.2
I have a high level of awareness about organic food	117	19.5

Source: Consumer survey 2016-2018

As per the results, while the majority of consumers (75.2%) had a significant level of awareness about organic food, about one-fifth of them (19.6%) had a good level of awareness. Out of the respondents, only 2.2% was unaware of organic food. As most people are educated, they can understand the general things prevalent in society. This finding corroborates with Bhatta et al. (2009), who has reported that most of the consumers knew about organic food. According to the results, the awareness of organic food diverges based on the type of consumer. Most consumers have thought that the foods are organic unless the growers don't not use chemical pesticides.

Consumers' present situation of buying organic food and WTP in future

Consumers' present situation of buying organic food and WTP for them in future is beneficial. Hence, these factors were studied in detail (Table 4).

Table 4. Consumers' present situation of buying and WTP for organic food in future

Variable	Frequency	Percentage
Present situation of buying (n=600)		
Yes	144	24.0
No	377	62.8
Not responded	79	13.2
Present frequency of buying (n=144)		
Most of the time	23	16.0
Sometimes	39	27.0
Rarely	82	57.0
WTP in future (n=600)		
Yes	314	52.4
No	224	37.3
Not responded	62	10.3

Source: Consumer survey 2016-2018

According to Table 4, although a considerable number of consumers (24%) was buying organic food by that time, the majority was not buying them. Even among the buyers, only a small fraction (16%) purchase them regularly, while others buy occasionally. However, from the whole sample, a higher percentage (52.4%) was willing to pay a premium price for organic food in future, if they are really organic. Somsak and Blut (2012), and Wahida et al. (2012) found similar results in their studies. According to Coulibaly et al. (2011), consumers in West Africa, Ghana, and Benin have agreed to pay a higher price for organic vegetables, while Aryal et al. (2009) reported that consumers are willing to pay additional prices for organic products if they are available.

Consumers' WTP premium price for organic food

Identifying the premium price willing to pay by the consumers is critical for the producers and marketers. Willingness to pay the premium price depends upon the product and consumers' socio-economic factors. Although the majority of consumers were willing to pay a premium price for organic food, the level of premium price varied. Therefore, consumers were inquired to understand their level of preference to pay a premium price, and results are presented in Table 5.

Table 5. Consumers' levels of payment of the premium price for organic food (n=314)

Level of the premium price	Frequency	Percentage
<10%	44	13.9
10-25%	66	20.9
26-50%	116	36.8
51-75%	51	16.1
76-100%	39	12.3

Source: Consumer survey 2016-2018

Accordingly, out of 314 consumers, a majority (36.8%) of consumers were ready to pay 26 to 50% of premium price. However, 28.4% (16.1+12.3) of the consumers were willing to pay more than 50% of the premium price for organic food, over conventional food. Also, 20.9% of consumers ready to pay 10 to 25% premium prices. In comparison, 13.9% of consumers did not ready to pay more than a 10% premium price for any organic food. This agrees with Aryal and Chaudhary (2009), who denoted that consumers' WTP premium price for organic food based on the product and the consumer. According to Rodiger and Hamm (2019), although normal consumers pay more attention on the price of foods, other motivational factors also play a determining role for their readiness to pay for organic products

Impact of socio-economic factors on consumers' WTP premium price for organic food

Measuring the impact of socio-economic factors on consumers' WTP premium price for organic food is possible by using binary logistic regression analysis. Before the analysis, the joint impact of all predictor variables arranged as dependent variable (WTP premium price) and was analyzed by using the concept of Nagelkerke R2, as explained in the model summary (Table 6). It describes the level of variation in the dependent variable that the model could explain.

Table 6. Model summary of binary logistic regression analysis

Model Summary			
Step 1	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
	628.180	.286	.382

As in Table 6, the model summary provides some approximation of R2 statistics in logistic regression. The -2 Log Likelihood statistics is 628.180, which is suitable for the model. This statistic shows how the model calculates the consumers' attitude in positive status. The result of Cox and Snell R2 indicates that the predictor variable explains 28.6% of the variation in the dependent variable.

Table 7. Goodness-of-fit (Model diagnostic); Hosmer and Lemeshow test

Hosmer and Lemeshow Test			
Step 1	Chi-square	df	Sig.
	6.352	8	.608

As observed from Table 7, the P-value 0.608 is higher than the level of significance at 5%. It can be decided that the data suitably fit the model. Since the p-value is 0.608, which is insignificant, the fitted logistic regression model is a good fit.

Table 8 presents the probability of an event occurring based on a one-unit change in the dependent variable keeping all other independent variables as constants.

Table 8. Results of the logistic regression analysis

		B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I.for EXP(B)*	
								Lower	Upper
Step 1[a]	Age	-.006	.009	.347	1	.556	.994	.976	1.013
	Gender (1)	.189	.202	.874	1	.350	1.208	.813	1.797
	Marital status(1)	-.092	.289	.101	1	.750	.912	.518	1.607
	Education			118.828	2	.000			
	Educa-tion(1)	-.019	.314	.004	1	.951*	.981	.530	1.816
	Educa-tion(2)	2.216	.314	49.814	1	.000	9.170	4.956	16.968
	Monthly income			19.971	2	.000			
	Monthly income(1)	.817	.253	10.464	1	.001*	2.265	1.380	3.716
	Monthly income(2)	1.087	.250	18.890	1	.000*	2.964	1.816	4.839
	Constant	-1.464	.523	7.838	1	.005	.231		

*** Significant at 95% CI-Confidence Interval**

As per the results of Table 8, out of the socio-economic characteristics, education and monthly income were significantly affected the consumers' WTP premium price for organic food, since the P-values were less than 0.05 at 95% confidence level. The variables, i.e., education and monthly income, were categorized into three as low, medium, and high. For both variables, the first category (low) was considered as the 'reference category.' Accordingly, consumers in the high educated category are 9.170 times more probable to spend a premium price for organic food, as compared to the consumers in the low educated category.

Similarly, the medium- and high-income earning consumers are 2.265 and 2.964 times more likely to spend the premium price for organic food, respectively, compared to consumers in the low-income category. Discussions with consumers revealed their high concern about their health. The reason there was, they believe most foods they buy are not healthy, but they have adapted to those foods because of their busy lifestyle. Therefore, they are willing to sacrifice

their cost for the healthiness of their families if healthy foods are available.

According to the field observations, there was a high tendency of consumers in higher professions such as doctors, nurses, teachers, and lecturers to buy organic food at a higher price. In some situations, doctors tend to cultivate and promote organic products by facilitating farmers to market their products for consumers; in some cases, they are not considering the premium prices as well. Similar to these findings, Akgungor et al. (2007) stated that urban consumers' are ready to consume organic food and spend premium prices, and the individuals with high income and education are buying organic products than the others.

Challenges in purchasing organic food by the consumers

Understanding the challenges against purchasing organically grown food by consumers is a critical, timely factor. Thus, challenges confronted by the consumers when purchasing organic food were studied in detail, and the findings are presented in Table 9.

Table 9. Challenges in buying organic food (n=600)

Constraint	Frequency	Percentage*
Organic foods are costly	516	86
Most organic foods are not available in the market	492	82
Unavailability of continuous supply in the market	474	79
Difficult to trust about organic foods	438	73
The dearth of certification of organic foods	414	69
Lack of market information about organic foods	384	64

Source: Consumer Survey 2016-2018

*These are multiple response questions; one respondent can have more than one option. Therefore, the cumulative percentage could be higher than 100%.

According to Table 9, the main challenge of buying organic food was the high cost related with them. Unavailability and discontinuous supply of organic food products were also significant issues. Unavailability of organic food in the market leads to irregular purchase and consumption patterns, while the lack of a clear and direct market flow of organic food from farmlands to market places leads to an irregular supply. Furthermore, the trust in organic food, problems in certification, and lack of market information negatively affect consumer preference.

CONCLUSIONS

The socio-economic characteristics lead to conclude that young and middle-aged married women take the priority among potential consumers in urban areas for locally-produced organic food. While most consumers have a significant level of awareness of organic food, a certain percentage of them have a higher level of awareness.

At present, only a small proportion of consumers buy organic food, and a majority of them buy organic food only occasionally. However, most are ready to pay for organic food products in future. Regarding the premium price, while a majority of consumers are ready to pay ¼ - ½ additional payment for organic food, another significant amount of consumers are ready to pay more than ½ of additional payment for organically grown food since they consider it as an investment for their health. This is a favorable situation for the development of the organic food marketing of the country. Some markets have made arrangements to sell organic food. However, these facilities need to be formalized by maintaining a continuous supply of organic food in various quantities, considering the demands of different type of consumers, in an attractive manner. It is beneficial to include useful information such as the nutrition composition, health benefits, and the method of preparation on the packet to facilitate consumers to buy organic food at reasonable prices without charging higher rates.

Consumers' level of education and monthly income are significant factors affecting WTP for organic food. There is a trend among educated people towards organic food. Especially doctors buy organic food whenever possible, as they often experience the unfavorable effects of conventional food, shown by their many patients. Some doctors cultivate organic crops for their consumption and advice others to do so.

The main challenges associated with purchasing organic food by the consumers are high cost, unavailability of goods, and lack of continuous supply. Problems related to the trustworthiness on organic products, certification systems, and lack of sufficient market information are also critical and need remedies. Since consumers showed a positive attitude on organic food, the demand for organic food will increase in future. Organic food producers should produce them properly, harvest them at the correct time without destroying the nutritional value and freshness, and certify the food items using suitable certification systems and labeling. These foods should be transported to the relevant markets in regular time durations and sell at reasonable prices, and dissemination of timely market information for the consumer is vital.

The government can arrange many awareness and promotional programs such as exhibitions, advertising, and poster displays, highlighting the benefits of organic food products such as health and eco-friendly qualities, to further encourage consumers towards purchasing organic food products. Programs for school children and their food based on organic food will help to motivate consumers regarding the purchase of organic food in future.

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SCIENTIFIC PAPER

WILLINGNESS TO PAY FOR LOCALLY PRODUCED ORGANIC FOODS BY URBAN CONSUMERS IN SRI LANKA

Fred R. David[1], Forest R. David[2], Tünde Zita Kovács[3], András Nábrádi[4]

[1]Professor, Francis Marion University, USA,
[2]PhD Student University of Debrecen, Faculty of Economics and Business,
[3]PhD Student University of Debrecen, Faculty of Economics and Business,
[4]Professor, University of Debrecen, Faculty of Economics and Business,

freddavid9@gmail.com
forestdavid5@gmail.com
kovacs.tunde.zita@econ.unideb.hu
nabradi.andras@econ.unideb.hu

Abstract: *In today's rapidly changing world, there is an increased need for excellent strategic planning. A firm's survival may indeed hinge on the firm's planning process being exemplary. Various aspects of the strategic planning process are under review today as organizations wrestle to compete more effectively. This paper reveals and describes five emerging trends or tools being utilized today by firms to more effectively engage in strategic planning. Specifically, the emerging trends and tools to be discussed in this paper are as follows:*
1) Assure vision and mission statements include desired characteristics
2) Perform SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis using AQCD (Actionable, Quantitative, Comparative, and Divisional) factors
3) Utilize varied sources to obtain AQCD information
4) Utilize QSPM (Quantitative Strategic Planning Matrix) analysis to determine the relative attractiveness of alternative strategies
5) Use excel-based software to facilitate and enhance the strategic planning process.
The purpose of this paper is to familiarize readers with basic new tools and techniques being used by organizations to effectively develop an improved strategic plan for the firm.

Keywords: *vision-mission, strategic planning, AQCD approach, QSPM analysis, strategic planning software.*
(JEL Classification: *M21, O21*)

INTRODUCTION

Every day companies and organizations make strategic decisions regarding what markets to enter, what markets to avoid, which competitors to acquire, and which firms and products to avoid. A firm's survival can hinge on these decisions being made correctly. Deciding what to produce and where, when, and how to compete is what leads to a sustainable competitive advantage. Even the best strategies must be implemented well through operational- or tactical-level activities like hiring and motivating employees, cutting costs, benchmarking, outsourcing, securing financing, and keeping facilities warm (or cool). Implementation activities are vitally important and must be monitored by strategists. However, effective strategy formulation, more so than operational tactics, are generally what lead to sustained competitive advantage. Strategic planning also consist of a series of concepts and tools when combined can yield positive results (Bryson, et al., 2018). Accordingly, this paper aims to enhance the process that firms utilize to formulate and ultimately decide upon particular strategies to implement.

To gain a sustainable competitive advantage, firms need

to provide unique products and services. Uniqueness matters. For example, Apple's computers, iPods, and iPhones all run on Apple's unique operating system. To assure necessary "uniqueness," firms must accept concessions in the strategy process to gain a sustainable competitive, as exemplified in the Apple example. All successful firms thus make trade-offs and tough decisions to establish uniqueness in developing, producing, and selling products and/or services.

This paper begins by discussing recent changes in how firms establish their vision and mission—items that represent the starting point for developing and nurturing a firm's uniqueness. Everything in strategy flows from a particular institution's vision and mission, and all successful firms are different (unique) from rival firms in some key ways.

A strategic plan is, in essence, a company's game plan. Profit margins among firms in most industries are so slim that there is little room for error in the overall strategic plan. A strategic plan results from tough managerial choices among numerous good alternatives, and it signals commitment to specific markets, policies, procedures, and operations in lieu of other, "less desirable" courses of action. Strategic planning is all about gaining and maintaining competitive advantage, and this paper aims to enhance this process. Normally, a firm can sustain a competitive advantage for only a certain period because of rival firms imitating and undermining that advantage. Thus, it is not adequate simply to obtain competitive advantage; firms must strive to achieve sustained competitive advantage by doing the following (David et al., 2020, p. 10):

1. Continually adapting to changes in external trends and events and internal capabilities, competencies, and resources.
2. Effectively formulating, implementing, and evaluating strategies that capitalize on those factors.
3. Offering products that are unique and not easily duplicated by rivals.
4. Accepting trade-offs by deciding what not to do; no firm can be everything to everybody.

This paper aims to reveal and describe five recent trends or tools that are enabling firms to gain competitive advantage over rival firms through engagement in more effective strategic planning. Specifically, the five new activities or practices being utilized are:

1) Assure vision and mission statements include desired characteristics

2) Perform SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis using AQCD (Actionable, Quantitative, Comparative, and Divisional) factors

3) Utilize varied sources to obtain AQCD information

4) Utilize QSPM (Quantitative Strategic Planning Matrix) analysis to determine the relative attractiveness of alternative strategies

5) Use excel-based software to facilitate and enhance the strategic planning process.

Trend 1: assure vision and mission statements include desired characteristics

Vision and mission statements are not just words that look nice when framed or engraved; they provide a basis for strategy and action; they reveal the reason a business opens its doors every day, the reason salespersons sell, the reason customers buy, and the reason employees work. These statements ideally are the passion behind the company, the foundation for employee morale, and the basis for customer loyalty. Recently, organizations are devising these statements to incorporate new characteristics and components, as revealed in this paper. Clear vision and mission statements enable strategists to lead the way as a firm strives to gain, sustain, and grow its customer base and competitive advantages (Nábrádi et al., 2018).

For many corporations, profit rather than vision or mission is the primary motivator, but profit alone is not enough to motivate people. Profit is perceived negatively by some stakeholders of some firms. For example, employees may see profit as something that they earn and management uses and even gives away to shareholders. Other research indicates focusing on a customer perspective is advantageous (David et al., 2016) Although this perception is disturbing to management, it clearly indicates that both profit and vision/mission are needed to motivate a workforce effectively (David et al., 2014).

Vision Statements

It is especially important for managers and executives in any firm to agree on the basic vision the organization strives to achieve in the long term. A vision statement should answer the basic question, "What do we want to become?" A clear vision provides the foundation for developing a comprehensive mission statement. Many organizations have both a vision and mission statement, but the vision statement should be established first and foremost.

Many organizations today develop a vision statement that answers the question "What do we want to become?" Developing a vision statement is often considered the first step in strategic planning, preceding even development of a mission statement. Many vision statements are a single sentence. However, a vision statement should reveal the type of business the firm engages. For example, a vision that says, "to become the best retailing firm in the United States," is too broad because that firm could be selling anything from apples (A) to zebras (Z). Although typically a single sentence, vision statements need to do more than identify the product or service a firm offers; vision statements should be written from a customer perspective. Ideally every organization wants its employees and customers to align their actions with the firm's vision. To fulfil this need, an excellent vision statement describes a desired future state. Being futuristic enables vision statements to be used to facilitate organizational change. The statement needs to be doable but challenging.

Increasingly today firms are developing vision statements that exhibit the following five characteristics; these five attributes can be used as guidelines for writing or evaluating vision statements. Any vision statement that scores a 5 out of 5 on these characteristics is exemplary. Let's call this vision assessment technique "The 5 out of 5 Test." When employees and managers together shape or fashion a vision statement of a firm, the resultant document can reflect the personal visions that managers and employees have in their hearts and minds about their own futures. Shared vision creates a commonality of interests that can lift workers out of the monotony of daily work and put them into a new world of opportunity, challenge, and belongingness. The motivation, dedication, and commitment associated with shared vision is an immense potential benefit for any firm or organization (David, David, David, 2020, p. 47).

1. Clear: reveals type of industry and what firm strives to become
2. Futuristic: reveals what the firm strives to become or accomplish within 5 years
3. Concise: one sentence in length
4. Unique: reveals the firm's competitive advantage
5. Inspiring: motivates to readers to support the firm

There is no one best vision statement for a particular company in a given industry, but the 5 out of 5 test can be used to both develop and evaluate vision statements. Three hypothetical, exemplary vision statements that meet the 5 out of 5 test are provided below:

Dr Pepper Snapple: to be the best beverage business globally; our brands are synonymous with refreshment, fun, and flavour today and tomorrow.

IBM: to be the world's most successful information technology company focused on helping customers apply technology to solve their problems now and in the future.

Hilton Worldwide: to fill the Earth with the light and warmth of hospitality by delivering exceptional experiences—every hotel and guest for all time

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Source: David, Fred R., David, Forest R., and David, Meredith E. 2020. Strategic Management Concepts and Cases – A Competitive Advantage Approach, 17th Edition. Pearson Education: Hoboken, N.J., p. 46.

Mission Statements

A mission statement is an "enduring statement of purpose that distinguishes one business from other similar firms. A mission statement identifies the scope of a firm's operations in product and market terms." It addresses the basic question that faces all strategists: "What is our business?" Developing a mission statement necessitates strategists pondering the nature and scope of present operations and to assess the potential attractiveness of future markets and activities. A mission statement functions as a constant reminder to its employees of why the organization exists and what the founders envisioned when they put their money and viability at risk to breathe life into their dreams.

A mission statement is sometimes called a creed statement, a statement of purpose, a statement of philosophy, a statement of beliefs, a statement of business principles, or a statement "defining our business. All organizations have a reason for existence, even if strategists have not consciously transformed this reason into writing. Strategists must not spend most of every day on administrative and tactical concerns; nor should they rush quickly to establish objectives and implement strategies before development of a vision and mission statement. Undue haste is so widespread that many corporations, organizations, and small businesses globally have not yet developed a formal vision or mission statement.

A mission statement needs to be broad in scope for at least two major reasons. First, a quality mission statement allows for the development of a range of feasible alternative objectives and strategies without curtailing management creativity. An overly general statement that does not exclude any strategy alternatives could be dysfunctional. Apple's mission statement, for example, should not open the possibility for diversification into nursing homes—or Ford Motor Company's into building airplanes. Additionally, a mission statement needs to be broad to reconcile differences effectively among, and appeal to, an organization's diverse stakeholders, the individuals and groups of individuals who have a special stake or claim on the company. In essence, numbers should not be included in a mission statement.

An effective mission statement should comprise less than one hundred words. The statement should arouse positive thoughts about an organization; it should be inspiring and motivate readers to action. A mission statement should be enduring, but subject to be changed at any time depending on changes anywhere in the integrative model of strategic management. An effective mission statement generates the impression that a firm is on the right track and worthy of investment from all stakeholders. A mission statement should include nine components (customers, products or services, markets, technology, concern for survival/growth/profits, philosophy, distinctive competence, concern for public image, concern for employees).

Well-managed companies today develop and utilize mission statements that include the following ten characteristics to help insure the firm has an excellent foundation strategic planning:

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1. Broad in scope; does not include monetary amounts, numbers, percentages, ratios, or objectives
2. Concise; fewer than one hundred words in length
3. Inspiring
4. Identifies the utility of a firm's products
5. Reveals that the firm is socially responsible
6. Reveals that the firm is environmentally responsible
7. Includes nine components: customers, products or services, markets, technology, concern for survival/growth/profits, philosophy, distinctive competence, concern for public image, concern for employees
8. Reconciliatory; resolves divergent views among stakeholders
9. Enduring but never cast in stone
10. Attracts customers; is written from a customer perspective

Source: David, Fred R., David, Forest R., and David, Meredith E. 2020. Strategic Management Concepts and Cases – A Competitive Advantage Approach, 17th Edition. Pearson Education: Hoboken, N.J., p. 49.

Trend 2: perform swot analysis using aqcd factors

SWOT analysis entails the discovery, utilization, and matching of key external and internal factors (Weihrich, 1982). External opportunities and threats refer to economic, social, cultural, demographic, environmental, political, legal, governmental, technological, and competitive trends and events that could substantially benefit or harm an organization in the future. Opportunities and threats are largely beyond the control of a single organization, thus, the word external. In contrast, internal strengths and weaknesses are an organization's controllable activities that are performed especially well or poorly. Internal factors arise in the activities of management, marketing, finance/accounting, production, and information systems of a business. Identifying and evaluating organizational strengths and weaknesses in the functional areas of a business is an essential strategic-management activity (Madai et al., 2019). Organizations strive to pursue strategies that capitalize on internal strengths and improve internal weaknesses.

SWOT analysis enables managers develop four types of strategies: SO (strengths-opportunities) strategies, WO (weaknesses-opportunities) strategies, ST (strengths-threats) strategies, and WT (weaknesses-threats) strategies. Matching key external and internal factors is a cornerstone activity in strategic planning. Thousands of organizations and companies annually perform SWOT analysis. However, most of those entities incorporate way too much vagueness in the process. Vagueness is disastrous in strategic planning (George & MacMillan, 1985; Love, Priem, & Lumpkin, 2002), thus providing impetus for this paper. Underlying external and internal factors that comprise SWOT analysis need to be specific in order to provide an adequate foundation for the generation of strategies (David, David, & David, 2017). More recent researchers (Mohamed, et al., 2018) have expanded the SWOT literature by introducing more sophisticated pairwise comparisons for selection strategies, to remove bias and introduce a new weighting system. The need for specificity is where AQCD (actionable, quantitative, comparative, and divisional) comes into play. SWOT analysis is arguably the most widely used strategic planning tool in the world, and AQCD factors are mandatory for its success.

This paper reveals how and why the key to effective SWOT analysis is the inclusion of external and internal factors that meet AQCD criteria. Specifically, each external and internal factor included in a SWOT analysis needs to be stated in AQCD terms to the extent possible, in order to minimize misinterpretation and to pave the way for the generation of strategies that are sufficiently specific, enabling the assignment of costs to those actions. The need for specificity is too commonly neglected in doing strategic planning (T. Z. Kovács, & A. Nábrádi, 2019).

The aqcd test

A recent journal article reveals that all external and internal SWOT factors need to meet AQCD criteria to the extent possible (David, Creek, & David, 2020). The purpose of external and internal assessments is to develop a finite list of opportunities that could benefit a firm, threats that should be avoided or mitigated, strengths that need to be capitalized on, and weaknesses that need to be improved upon (Capps III & Glissmeyer, 2012). As the term finite suggests, the external and internal assessments do not result in an exhaustive list of factors that could influence the business. For this reason, each SWOT factor should be specific and useful, which the AQCD test aims to assure. Normally ten opportunities, ten threats, ten strengths, and ten weaknesses comprise the foundational information in a SWOT analysis (Kearns, 1992).

Actionable

In a SWOT analysis, the term "actionable" refers to the need for each external and internal factor to be meaningful and helpful in ultimately deciding what actions or strategies a firm should consider pursuing. When actionable, firms are able to respond either offensively or defensively to the factors by formulating strategies that capitalize on external opportunities, minimize the impact of potential threats, take advantage of strengths, and/or improve upon weaknesses. Actionable factors should be specific and within the control of management (Coman & Ronen, 2009). For example, a factor such as "the firm's current ratio is 2.25" is not actionable because it gives no insight on what to do about the issue.

Quantitative

The importance of objective strategic planning has long been advocated in management literature (e.g., David, 1986; Tavana and Banerjee, 1995). In a SWOT analysis, the term "quantitative" refers to the need for each external and internal factor to include percentages, ratios, currencies, and numbers to the extent possible. Quantification is essential so strategists can assess the magnitude of opportunities and threats and take appropriate actions. For example, rather than saying "Marketing is moving rapidly to social media," strategists need to conduct research and find, for example, that "spending on online advertisements globally is rising 13 percent annually and represents about 48 percent of total advertising spending in the USA." A key reason why strategies should be formulated and implemented based on specific factual information to the extent possible is the high stakes associated with strategic planning.

Comparative

In a SWOT analysis, the term "comparative" refers to the need for external and internal factors to reveal changes over time or versus rival firms or compared to industry averages. Otherwise it is difficult to put any fact or number in perspective. Thus, factors to be included in a SWOT analysis should be garnered in comparative terms, so managers can more effectively use the information in the matching process to generate feasible alternative strategies. Comparative factors can help to identify distinctive competencies (Kumar, Massie, & Dumonceaux, 2006) or reveal the most appropriate locations to source and market products (Kogut, 1986). Vagueness is harmful in factor generation because millions or even billions of dollars could ultimately hinge on the strategic decisions that the factors provide a basis for making.

Divisional

In a SWOT analysis, the term "divisional" relates to the firm's profit centers that could be for example by various products and/or regions. Monitoring divisional factors allow inferences to be drawn regarding what products and regions are doing well or poorly. This distinction is especially important since more and more firms are shifting strategic management responsibilities from the corporate level to the divisional level (Grant, 2003). Arguably the most important strategic decision that faces companies and organizations annually is how best to allocate resources across its segments (divisions), regions, or products (David, et al., 2020). Therefore, to the extent possible, couching external and internal factors in divisional terms, rather than whole firm terms, is helpful and actually essential in deciding how to allocate scarce resources across divisions/segments.

Trend 3: utilize varied sources to obtain aqcd information

Another key trend being recently incorporated by organizations in more effectively doing strategic planning is to utilize varied sources to obtain AQCD information. A wealth of strategic information is available to organizations from both published and unpublished sources. Unpublished sources include customer surveys, market research, speeches at professional and shareholders' meetings, television programs, interviews, and conversations with stakeholders. Published sources of strategic information include periodicals, journals, reports, government documents, abstracts, books, directories, newspapers, and manuals. There are many excellent websites for gathering strategic information, but six outstanding sites that firms are increasingly utilizing to obtain AQCD information are as follows:

1. http://finance.yahoo.com
2. www.hoovers.com
3. www.morningstar.com
4. www,mergentonline.com
5. http://globaledge.msu.edu/industries/
6. Corporate website of companies

The fifth website listed above is operated by Michigan State University and provides industry profiles that are an excellent source for information, news, events, and statistical data for any industry. In addition, the following databases are increasingly being utilized in developing, determining, and prioritizing AQCD oriented external and internal factors for inclusion in SWOT and QSPM (discussed next) analyses:

- IBISWorld—Provides online USA Industry Reports (NAICS), U.S. Industry iExpert Summaries, and U.S. Business Environment Profiles. A global version of IBIS is also available.
- Lexis-Nexis Academic—Provides online access to newspaper articles (including New York Times and Washington Post) and business information (including SEC filings).
- Lexis-Nexis Company Dossier—Provides online access to extensive, current data on 13 million companies. It collects and compiles information into excellent documents.
- Mergent Online—Provides online access to Mergent's Manuals, which include trend, descriptive, and statistical information on hundreds of public companies and industries. Unconsolidated company income statements and balance sheets are provided.
- PrivCo—Provides information on privately held companies, including private financials and revenues; private M&A deals and deal multiples, private firm valuations, VC funding, private equity deal history; and private and family ownership data.
- Regional Business News—Provides comprehensive full-text coverage for regional business publications; incorporates coverage of more than 80 regional business publications covering all metropolitan and rural areas within the United States.
- Standard & Poor's NetAdvantage—Provides online access to Standard & Poor's (S&P) Industry Surveys, stock reports, corporation records, The Outlook, mutual fund reports, and more. Locate the "Company" tab at the top of the page or the "Simple Search" option located on the right side of the page. Use the "Company Profile option.
- Value Line Investment Survey—Provides excellent on-

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line information and advice on approximately 1,700 stocks, more than 90 industries, the stock market, and the economy. Company income statements and balance sheets are provided.
- U.S. Securities and Exchange Commission—Provides the Form 10K for publicly held companies in the United States. Use the search box at the top of the page or look under the Filings" tab along the top of the page.
- Company Annual Reports On-Line (CAROL)—Provides direct links to publicly held companies financial statements in both Europe and the United States.
- Source: David, Fred R., David, Forest R., and David, Meredith E. 2020. Strategic Management Concepts and Cases – A Competitive Advantage Approach, 17th Edition. Pearson Education: Hoboken, N.J., p. 78.

Trend 4: utilize qspm analysis to determine the relative attractiveness of strategies

Because no organization has unlimited resources, top managers must decide which alternative strategies will benefit the firm most. Strategy-formulation decisions commit an organization to specific products, markets, resources, and technologies over an extended period of time. Strategies determine long-term competitive advantages. For better or worse, strategic decisions have major multifunctional consequences and enduring effects on an organization. Top managers have the best perspective to understand fully the ramifications of strategy-formulation decisions; they have the authority to commit the resources necessary for implementation.

Other than ranking strategies to determine their respective relative attractiveness, organizations are increasingly using QSPM (Quantitative Strategic Planning Matrix) analysis (David, 1986; David, David, & David, 2017). The QSPM allows strategists to evaluate alternative strategies objectively, based on previously identified external and internal key success factors. Like other strategy-formulation analytical tools, the QSPM requires the assignment of ratings (called attractiveness scores), but making "small" rating decisions enables strategists to make effective "big" decisions, such as which country to spend a billion dollars in to sell a product. Conceptually, QSPM analysis is used to determine the relative attractiveness of various strategies based on the extent that key external and internal factors are capitalized on or improved David, et al., (2016). The relative attractiveness of each strategy is computed by determining the cumulative impact of each external and internal factor. Any number of strategies can be included in the QSPM.

The basic format of the QSPM is illustrated in Table 1. Note that the left column of a QSPM consists of key external and internal factors (from Stage 1), and the top row consists of feasible alternative strategies (from Stage 2). Specifically, the left column of a QSPM consists of information obtained directly from a SWOT analysis respective external and internal factors. In a QSPM, strategies should be stated in specific terms, such as "Open 275 new stores in Indonesia," rather than "Expand globally" or "Open new stores in Africa." Specificity is vital because ultimately a dollar value must be established for each recommended strategy; it would be impossible to establish a dollar value for "expand globally." If you cannot reasonably assign a dollar value to a QSPM (or SWOT) strategy, then the strategy is too vague. Companies today have come to realize that vagueness is disastrous in strategic planning.

Table 1 – The QSPM Basic Format

Alternative strategies							
	Weight	Strategy 1		Strategy 2		Strategy 3	
		AS	TAS	AS	TAS	AS	TAS
Key external factors							
Economy	0,25	1	,25	3	,75	2	,50
Political/legal/ governmental	0,30	-		-		-	
Social/cultural/demo-graphic/environmental	0,10	1	,10	2	,20	3	,30
Technological	0,20	-		-		-	
Competitive	0,15	2	,30	1	,15	3	,45
External total	1,00	-					
Key internal factors							
Management	0,15	3	,45	2	,30	1	,15
Marketing	0,25	-		-		-	
Finance/accounting	0,20	-		-		-	
Production/operations	0,15	3	,45	1	,15	2	,30
Research and development	0,20	2	,40	1	,20	3	,60
Management information systems	0,05	1	,05	2	,10	3	,15
Internal total	1,00						
Sum total attractiveness scores	2,00	13	2,00	12	1,85	17	2,45

Source: Meredith E. David, Fred R. David & Forest R. David (2016): The quantitative strategic planning matrix: a new marketing tool, Journal of Strategic Marketing

The components of the QSPM include: strategic alternatives, key factors, weights, attractiveness scores (AS), total attractiveness scores (TAS), and the sum total attractiveness score. The three new terms just introduced—(1) attractiveness score, (2) total attractiveness score, and (3) the sum total attractiveness score—are defined and explained as the six steps required to develop a QSPM are discussed below (David, David, & David, 2020, p. 183-184):

Step 1

Make a list of the firm's key external opportunities and threats and internal strengths and weaknesses in the left column of the QSPM. This information should be taken directly from a SWOT analysis.

Step 2

Assign weights to each key external and internal factor.

These weights are identical to those in the EFE (External Factor Evaluation) Matrix and IFE (Internal Factor Evaluation) Matrix. The weights are presented in a straight column just to the right of the external and internal factors.

Step 3

Examine the Stage 2 matching matrices, and identify alternative strategies that the organization should consider implementing. Record these strategies in the top row of the QSPM.

Step 4

Determine the Attractiveness Scores (AS), defined as numerical values that indicate the relative attractiveness of each strategy considering a single external or internal factor. Attractiveness Scores (AS) are determined by examining each key external or internal factor, one at a time, and asking the question, "Does this factor affect the choice of strategies being made?" If the answer to this question is yes, then the strategies should be compared relative to that key factor. Specifically, AS should be assigned to each strategy to indicate the relative attractiveness of one strategy over others, considering the particular factor. The range for AS is 1 = not attractive, 2 = somewhat attractive, 3 = reasonably attractive, and 4 = highly attractive. By "attractive," we mean the extent that one strategy, compared to others, enables the firm to either capitalize on the strength, improve on the weakness, exploit the opportunity, or avoid the threat. Work row by row in developing a QSPM. If the answer to the previous question is no, indicating the respective key factor has no effect on the specific choice being made, then do not assign AS to the strategies in that set. Use a dash (or 0 if using the template) to indicate that the key factor does not affect the choice being made. Note: If you assign an AS score to one strategy, then assign an AS score(s) to the other—in other words, if one strategy receives a dash (or 0)—then all others must receive a dash (or 0) in a given row.

Step 5

Compute the Total Attractiveness Scores (TAS). TAS are defined as the product of multiplying the weights (Step 2) by the AS (Step 4) in each row. The TAS indicate the relative attractiveness of each alternative strategy, considering only the impact of the adjacent external or internal critical success factor. The higher the TAS, the more attractive the strategic alternative (considering only the adjacent critical success factor).

Step 6

Compute the Sum Total Attractiveness Score. Add TAS in each strategy column of the QSPM. The Sum Total Attractiveness Scores (STAS) reveal which strategy is most attractive in each set of alternatives. Higher scores indicate more attractive strategies, considering all the relevant external and internal factors that could affect the strategic decisions. The magnitude of the difference between the STAS in a given set of strategic alternatives indicates the relative desirability of one strategy over another.

QSPM analysis can be used to make decisions in a variety of business types ranging from small businesses to large multinational corporations, not-for-profits and governments. With respect to using QSPM analysis in a rapidly changing world, the technique can be immensely helpful. Take for example the new BMW plant on schedule to be built in Debrecen, Hungary. BMW could have used QSPM analysis to weight and rank various options on the plant location and ultimately BMW decided on Debrecen for the new plant location. Major strategic decisions require increased research and objective decision-making; it is our view that QSPM analysis is especially effective and useful when the data flowing from the SWOT is well researched and meets AQCD standards. A rapidly changing world and increased need for agility necessitates well thought out and constructed strategic long term strategies; QSPM analysis can aid immensely in making excellent long term strategic decisions in a turbulent business environment such as we experience today.

QSPM can also be effectively used for more tactical mid range strategies. For example, BMW deciding on increasing SUV production by 5 percent or increasing compact electric car production by 5 percent could also be determined through QSPM analysis. An example such as this would address a more agile business environment where consumer preferences change more frequently than historically. This latter example is not as strategic in nature as where to locate a new facility, as more tactical strategies such as these can be changed the next year more easily than relocating a manufacturing facility. In many respects, having a detailed strategic planning process and using techniques similar to the QSPM are more important now than ever since there is far less forgiveness for strategic mistakes due to increased agility of rival firms and ever-changing consumer preferences and habits.

Trend 5: use excel-based software to facilitate the strategic planning process

Another emerging trend or tool being utilized by companies to more effectively do strategic planning is incorporation of excel-based software to facilitate the process. Specifically, the software provided at the www.strategyclub.com website is increasingly being used by companies to facilitate development of appropriate planning matrices and more. Given below are twelve reasons that companies today are using the excel-based strategic planning template at www.strategyclub.com (David, David, & David, 2020, p. 23)

1. To save time in preparing a strategic-management case analysis; enables user to focus on the "thinking rather than the mechanics" of developing matrices and performing analyses.
2. To follow the correct process in formulating and implementing strategies.
3. To avoid mistakes in math calculations, plotting points, and drawing graphs.
4. To develop professional-looking charts, graphs, and matrices.
5. To develop existing and projected financial ratios.
6. To correctly place firms in BCG and IE portfolio

matrices.

7. To examine many different scenarios for using debt versus stock to raise needed capital, using EPS-EBIT analysis.

8. To vary weights and ratings in matrices and to see the resultant impact on total weighted scores.

9. To more easily share information with team members and colleagues.

10. To more easily develop projected financial statements to reveal the expected impact of various strategies.

11. To develop skills with perceptual mapping or product positioning.

12. To gain experience using actual corporate strategic planning software; many business jobs require proficiency in Excel, which students gain in using the template.</TBL>

CONCLUSION

Strategic management enables a business or organization to be proactive rather than reactive in shaping its own future; it allows an organization to initiate and influence (rather than just respond to) activities, and thus, to exert control over its own destiny. Small business owners, chief executive officers, presidents, and managers of many for-profit and non-profit organizations have recognized the importance of doing strategic planning effectively – and they are increasingly using the five tools and techniques described in this paper to be successful in this endeavour. To gain and sustain competitive advantages, firms must create and nurture a clear vision and mission, and then systematically perform SWOT and QSPM analyses utilizing AQCD oriented factors.

Consistent business success rarely happens by luck or chance; it most often results from careful strategic planning followed by diligent, intelligent, hard work. If the process were easy, every business would be successful. Scanning appropriate external and internal sources of information, as described in this paper, to identify and prioritize key AQCD oriented external and internal factors is critically important – rather than just haphazardly deciding upon vague, useless, nebulous, external and internal factors. Consistent success requires that strategists gather and assimilate relevant data, make tough trade-off decisions among various options that would benefit the firm, motivate and reward employees, and continually adapt to change. Additionally, using modern strategic planning software to facilitate staying on track in working through the planning process is increasingly being practiced.

Most persons or organizations realize that developing an excellent strategic plan can be the difference between organizational success and failure. Hopefully this paper provides guidance to managers of all kinds of organizations as they strive to continually improve “how they do strategic planning” to help gain and sustain competitive advantage.

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SCIENTIFIC PAPER

GENDER DYNAMICS IN CONSUMER PREFERENCES AND WILLINGNESS TO PAY FOR EDIBLE MUSHROOMS IN GHANA

Rebecca Owusu[1], Florence Sefakor Dekagbey[2]

[1,2] Department of Agricultural Economics and Extension
University of Cape Coast, Cape Coast

[1]rebecca.owusu@ucc.edu.gh,
[2]sefakorsefa8@gmail.com

Abstract: *This study uses choice experiment to investigate men and women consumers' preferences and willingness to pay for edible mushrooms in Ghana. We used a mixed logit model to examine preference heterogeneity. The econometric modelling revealed that men consumers have a negative utility for oyster mushrooms compared to straw mushrooms. They also have preference for cheap and locally cultivated mushrooms compared to expensive and imported mushrooms. However, women consumers have preferences for the shiitake mushroom variety compared to the straw mushroom variety. They also prefer cheap mushrooms irrespective of their location and such mushrooms must be frozen and not fresh. The findings highlight variation between men and women in preferences for mushroom variety, however, both have preferences for low prices, suggesting that both genders are economically rational and obey the law of demand.*

Keywords: *edible mushrooms, gender, preferences, choice experiment, mixed logit*
(JEL Classification: *B21, D12*)

INTRODUCTION

Mushroom, often considered as vegetable in the food market is cultivated and consumed globally because of its nutritional, medicinal and economic benefits. Nutritionally, mushroom helps to boost the immune system and reduces the risk associated with obesity, cancer and heart diseases. Economically, mushroom production plays an important role in most economies by serving as an alternative source of livelihood for most citizens and generating income for producers. Mushroom production and per capita consumption have increased significantly worldwide, especially since the 1990s (Royse, 2014). Research shows that world trade in mushrooms and mushroom based products is estimated at USD 35billion (Chang, 2006). Out of this value, Africa contributes just 1% (Geofrey, 2012). The low contribution of Africa's mushroom market to the global trade has mainly been assigned to lack of information on the nutritional benefits of mushrooms in addition to poor market organisation and linkages.

Improving the marketing aspect of mushroom production requires an understanding of consumer preferences. Specifically, what are consumers' preferences for different mushroom varieties including straw, white button, oyster and milky mushrooms, among others. The quest to understand consumer preferences has attracted attention among researchers in recent times. For instance, Mahantesh, Ahlawat, and Manikandan (2014) conducted a study on mushroom consumption and purchasing behaviour in India and found that out of 258 respondents, 206 respondents preferred the white button mushroom variety to oyster mushroom, while the shiitake and milky mushrooms were preferred by few consumers. In a related study, Boin and Nunes (2018) found among a sample of Portuguese consumers that 81.9% preferred mushrooms, out of which 41% consumed mushrooms weekly. The findings also showed that the consumers frequently consumed the white button mushroom compared to the other types of mushrooms. Contrary to their findings, a survey conducted by Kortei et al. (2018) on mushroom consumption and the possible use of gamma

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irradiation for sterilization of compost for its cultivation in Southern Ghana revealed that 72% of consumers preferred oyster mushroom to the termite and straw mushrooms.

Although previous studies have revealed consumer preferences for different mushroom varieties (Kotei et al., 2018; Boin & Nunes, 2018; Mahantesh et al., 2014), the following limitations are identified. Firstly, the studies employed a revealed preference approach to examine consumer preferences ignoring potential unobserved heterogeneity. Secondly, the studies ignored gender dynamics in consumer preferences by assuming that both men and women have equal preferences for mushroom varieties. However, research has shown that men and women have varying preferences (Gough & Conner, 2006; Roos, Prättälä, & Koski, 2001), which need to be accounted for. The present study addresses the limitations by adopting a stated preference approach that allows one to model unobserved heterogeneity for preferences and to account for substitution trade off among a bundle of goods, in this instance, mushrooms.

Although there are different types of stated preference techniques such as contingent valuation and discrete choice experiment, the latter is adopted in this study because it affords the opportunity to examine multiple attributes of mushrooms, and to also compute consumers' willingness to pay. The only known study that has modelled consumer preferences for mushrooms using choice experiment is Chakrabarti, Campbell, and Shonkwiler (2019a). Chakrabarti et al. (2019a) investigated consumer preference and willingness to pay for mushrooms in Connecticut in the United States and found that there were different segments of consumers with preferences for different mushroom attributes. However, there is a point of departure of this study from Chakrabarti et al. (2019a), and that is accounting for potential gender variation in preferences.

The specific choice experiment model adopted in the study is mixed logit model, which is an advanced discrete choice model (Hole & Kolstad, 2012). The mixed logit model is preferred to the conditional logit model because it has the flexibility of accounting for unobserved heterogeneity among consumers. The study was conducted among consumers in the Cape Coast metropolis of the Central region of Ghana. The Cape Coast metropolis was selected for the study because it is one of the key areas earmarked for mushroom production in Ghana. Using a sample of 190 consumers, the econometric modelling revealed that men mushroom consumers prefer oyster mushroom to straw mushroom. They also have preferences for mushrooms that have been locally produced compared to the imported ones. The women mushroom consumers on the other hand preferred shiitake mushrooms to straw mushrooms. Like the men consumers, the women consumers also preferred local mushrooms to imported mushrooms.

The rest of the paper is organised as follows. Section 2 presents the literature review of the study followed by section 3 on the methods. Section 4 presents the results and discussion, and section 5 concludes the paper with policy implications.

LITERATURE REVIEW

Consumer behavior in the mushroom market has been of interest to researchers over the years. For instance, Patterson (2003) conducted a study among mushroom consumers in the United States and found that 94% of the sampled consumers preferred white button mushrooms to portabella and others. Mayett et al. (2006) also examined consumption trends of edible mushrooms in Mexico and found that about one-half (49.4%) of the urban consumers do not buy mushrooms, independently of their social level. The other half (50.6%) do not buy mushrooms for several reasons such as feeling of dislike (75.5%), unawareness (18.3%), and 6.2% constituted other various reasons.

Mahantesh et al. (2014) study of mushroom consumption and purchasing behavior in India showed that all the 285 respondents responded on the frequency of consuming three different mushroom recipes: mushroom curry, mushroom salad or pickle and other recipes. The results further showed that colour, price and shape were the factors that influenced consumers' purchasing behavior of mushrooms. Gürgen, Yildiz, and Yildiz (2018) conducted a study on consumer preference of mushrooms using fuzzy analytic hierarchy process in Turkey and found that consumers preferred to buy well packaged mushrooms from market because of higher confidence in the market. Also, the consumers perceived that packaged mushrooms are healthier than the unpackaged ones in the market. The findings also revealed that consumers preferred mushrooms that are cultivated to those from the wild because of fear of poisoning.

Also, Linde et al. (2014) study on mushroom acceptability and consumption intention in Brazil revealed that the most accepted mushrooms in Brazil are the white button mushroom, followed by oyster mushroom, almond mushroom and shiitake mushroom because of its aroma, flavor, and fibre. Boin and Nunes (2018) study on the consumption behavior and influencing factors in a sample of Portuguese population revealed that 81.9% of the respondents consumed mushrooms, out of which 41% consumed mushrooms once a week. The white button mushroom was the most frequently consumed mushroom compared to the brown and shiitake mushrooms. Also, canned mushrooms were frequently consumed in comparison to the fresh ones. A similar study conducted by Chakrabarti et al. (2019a) on eliciting consumer preference and willingness to pay for mushrooms in the United States revealed a segmentation among mushroom consumers. Chakrabarti et al. (2019a) is the only known study of the mushroom market using discrete choice experiment techniques.

MATERIALS AND METHODS

Choice experiment design

Identification of attributes and their levels represent the starting point of choice experiment studies. With thorough literature search and experts' interviews, we identified the following attributes: mushroom variety, mushroom form, label, location and price per kilogram as the attributes for the study. The mushroom variety attribute was of three levels-straw, shiitake and oyster. There were also four levels to the mushroom form attribute-fresh, frozen, dried and canned.

The label and the location attributes were of two levels: wild and cultivated for the label attribute, local and imported for the location attribute. The price attribute had three levels (GH¢15, GH¢ 30 and GH¢50). Table 1 shows the description of the attributes and the levels used in the choice experiment.

Table 1: Attribute description and levels

Attributes	Descriptions	Levels
Mushroom variety	The common mushroom varieties present in the Ghanaian market	Straw
		Shiitake
		Oyster
Form of mushroom	Nature of mushrooms presented for sale in the Ghanaian market	Fresh
		Frozen
		Dried
		Canned
Label	Mode of obtaining mushrooms for the Ghanaian market	Wild
		Cultivated
Location	Origin of mushrooms	Local
		Imported
Price/kg	Price per kg of mushrooms presented for sale	GH¢ 10
		GH¢ 15
		GH¢ 30

Note: GH-Ghana

After identifying the attributes and their corresponding levels, an efficient choice experiment design was generated in STATA 14 with priors obtained from a pilot study conducted in the University of Cape Coast. Efficient design is more suitable because it is cost effective and increases sampling (Bliemer & Rose, 2010). The final design had 30 paired choice sets that were randomly grouped into 10 scenarios. Each choice set was composed of two alternatives (A and B), and a third alternative, that represented none of the options. Figure 1 shows a sample choice set.

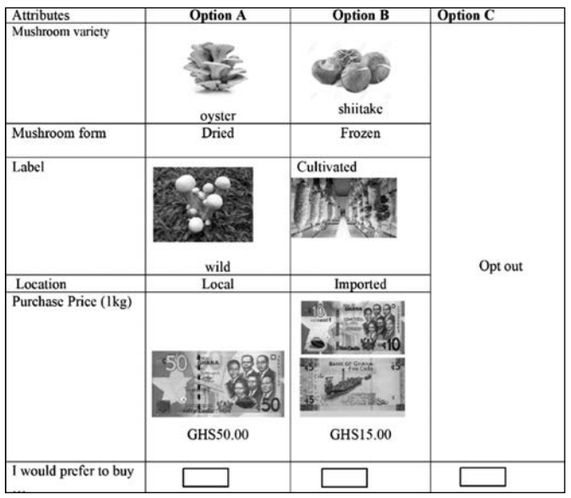

Figure 1: sample choice set

The target population included consumers in the Central region of Ghana. Respondents were selected using a multistage sampling technique. In the first stage, Cape Coast metropolis, was purposively selected. This was followed by the selection of the communities within the metropolis-Duakor, Amamoma, Cape Vars, and Ayensu. The overall sample for the study comprised 190 respondents, with 30 from Duakor, 50 from Ayensu, 60 from Cape Vars and 50 from Amamoma. The data collection was conducted between September and October 2019. The survey comprised information on the socio-economic characteristics of the respondents, and the choice experiment. Each respondent was asked to choose his/her preferred edible mushroom alternative in 10 choice situations.

Econometric framework

The discrete choice experiment technique is based on Lancaster's characteristic theory of value, which states that an individual obtain utility from the characteristics of the good rather than the good itself. Its econometric basis is enshrined in the random utility theory.

The attributes of alternative j in choice occasion t faced by consumer n could be labelled as vector X_njt. The utility obtained by consumer n from alternative j in choice occasion t is specified as:

$$U_{njt}=\beta_n X_{njt}+\varepsilon_{njt} \quad (1)$$

where the coefficients of β_n is unobserved and varies in the population with a density function f(β_n/θ) while θ are parameters to be estimated. ε_njt is an unobserved random term that is identically and independently distributed. The unconditional probability of the sequence of choices made by an individual is expressed as:

$$P_{njt}(\theta) = \int L_{nj}(\beta_n) f(\beta_n/\theta) d\beta_n \quad (2)$$

The mixed logit specified in eq. (2) accounts for only unconditional heterogeneity but not conditional heterogeneity (explain the sources of heterogeneity). To account for conditional heterogeneity, model expansion is required to incorporate socio-economic characteristics of respondents. This process enables the model to pick up both random and conditional heterogeneity and further improves the model fit (Birol et al. 2006). Including respondents' socio-economic characteristics as S_n, results in eq. (3):

$$P_{njt} = \int \frac{e^{\beta_n' x_{nj}} + S_n}{\sum_{j=1}^{j} e^{\beta_n' x_{nj}} + S_n} f\left(\beta_n/\theta\right) d\beta_n \quad (3)$$

where all parameters are as earlier defined.

Maximum likelihood (ML) is often employed in accounting for preference heterogeneity. The ML works on the principle of searching for a solution by simulating n draws from distributions with given means and standard deviations (Birol et al., 2006). Joint simulated distribution integration is used to obtain probabilities.

The standard approach to simulation estimation is based on random draws. However, with large samples and complex models, this can be very time consuming. The Halton draw, therefore, serve as an alternative to the random draw with the advantage of speed gains and no degradation in simulation performance (Revelt & Train, 1998).

Estimating willingness to pay

The consistency of choice experiment with consumer theory makes it suitable in estimating welfare effects such as the willingness to pay. Willingness to pay (WTP) is a measure of the trade-off between non-price attributes and a price attribute. In the choice experiment literature, two approaches have been proposed in estimating WTP: the indirect ratio method and the direct method (Owusu Coffie, Burton, Gibson, & Hailu, 2016). The indirect approach, also called preference space model has received lots of criticisms in the literature because of the biases it introduces into the WTP values (Hole & Kolstad, 2012). Hensher (2006) therefore advances that individual level parameters of the preference space model be used to compute the willingness to pay values. In this paper, the individual level parameters were simulated in Stata using 10 000 draws, followed by the calculation of the willingness to pay values as the ratio of non-price attributes to the price attribute.

RESULTS AND DISCUSSION

Descriptive statistics

The descriptive statistics of respondents are presented in Table 2. From the table, the average age of the sampled consumers is 26, indicating a youthful population. The gender variable, which was measured as a dummy (0,1) has an average of 0.3, indicating that most of the sample are men compared to women. The educational level also measured as a dummy (where educated =1) has a mean of 0.98, suggesting that almost all the sampled consumers have some form of education. The average monthly income for the sample was 759 Ghana cedis. For the men and women specific characteristics, we observe that both are about equal age. The men in the sample seem to earn more than their female counterparts, however, a t-test shows no significant differences in the income of both men and women. The results in the table also show all the men in the sample are educated compared to the women where some are not educated, although those educated are in the majority.

Table 2: Sample descriptive statistics

	Pooled sample		Men		Women	
Variable	Mean	SD	Mean	SD	Mean	SD
Age	26	8.9	26	8	27	11
Gender	0.311	0.464	-	-	-	-
Educational level	0.98	0.12	1	0	0.94	0.22
Average monthly income (Ghana cedis)	759	618	790	667	698	488

Note: SD-standard deviation

Standard mixlogit model

The correlated mixed logit model estimates are presented in Table 3. Consistent with economic theory, the price coefficient for men mushroom consumers is negative and significant, indicating that consumers prefer a lower priced mushroom to a higher priced mushroom. The utility coefficient in Table 3 also show that men consumers have a disutility for the oyster mushroom compared to the straw mushroom. They are, however, indifferent towards shiitake mushroom. Men mushroom consumers are also indifferent towards mushroom forms such as frozen, dried or canned as shown in the insignificant coefficient of those attributes. The location attribute is also negative and significant showing that men consumers prefer locally produced mushrooms to imported mushrooms. The women mushroom consumers also have preference for shiitake mushroom compared to straw mushroom. They also have a utility for frozen mushrooms compared to fresh mushrooms. Like the men, women consumers prefer locally produced mushrooms to imported mushrooms. Their demand also follows the law of demand where more is demanded at a lower price and vice versa. The significance of most of the standard deviations (heterogeneity in the mean) show that unobserved heterogeneity exists in the preferences of consumers for mushrooms.

Table 3: Correlated mixlogit model estimates

	Men-ML correlated		Women-ML cor-	
	Mean	SE	Mean	SE
Taste parameters				
Oyster mushroom variety	-0.35***	0.16	-0.40	0.37
Shiitake mushroom variety	-0.16	0.14	0.89***	0.37
Frozen mushroom	-0.22	0.19	0.90**	0.45
Dried mushroom	0.05	0.18	0.61	0.43
Canned mushroom	-0.39	0.25	0.19	0.61
Mushroom label	0.04	0.13	-0.53	0.40
Location	-1.38***	0.21	-1.95***	0.52
Price	-0.04***	0.01	-0.11***	0.02
Status quo	-4.53***	0.54	-1.77*	1.04
Heterogeneity in mean				
Oyster mushroom variety	0.70***	0.34	1.38***	0.45
Shiitake mushroom variety	0.48*	0.26	2.32***	0.48
Frozen mushroom	0.97***	0.28	1.03***	0.48
Dried mushroom	0.80***	0.25	1.01***	0.50
Canned mushroom	1.14***	0.36	2.38***	0.72
Mushroom label	0.13	0.16	1.91***	0.47
Location	1.72***	0.22	6.11***	1.16
Price	0.06***	0.01	0.18***	0.04
Status quo	7.85***	1.05	24.67***	5.12
LL	-196.00		-278.57	
BIC	2278.93		960.99	
N	3930		1770	

N=LL-Log likelihood, BIC-Bayesian information criteria, N-Number of observations

Mixed logit model with interaction

To explain the sources of heterogeneity among respondents, the attributes were interacted with some socioeconomic variables including age, income level and educational status. The results are presented in Table 4. From the table, we observe that older men consumers of mushroom prefer mushrooms that are cultivated compared to mushrooms from the wild as indicated by the negative and significant interaction between label and age (-0.02). This finding is consistent with Gurgen et al., (2018) study that found sampled consumers preference for cultivated mushrooms compared to the wild. The men consumers' preference for the cultivated mushroom in comparison to the wild is likely rising out of the fear of poisoning from consuming mushrooms from the wild.

The older men consumers also prefer mushrooms that have been cultivated locally compared to imported mushrooms. However, educated men mushroom consumers prefer to consume imported mushrooms to local mushrooms. Of the interaction for the women mushroom consumers, only the age with location interaction is significant and the result show that the older women prefer local mushrooms to imported mushrooms. When conditional heterogeneity has been accounted for, we observe that several attributes in the men consumers model are significant indicating that conditional heterogeneity is important in accounting for preferences.

Table 4: Mixed logit model with interaction estimates

	Men-ML correlated		Women-ML correlated	
	Mean	SE	Mean	SE
Taste parameters				
Oyster mushroom variety	-0.19	0.46	-0.75	1.48
Shiitake mushroom variety	-0.45**	0.18	-0.38	0.41
Frozen mushroom	-0.30	0.19	0.59	0.58
Dried mushroom	-0.28	0.19	0.31	0.58
Canned mushroom	-0.69**	0.28	-1.12	0.73
Mushroom label	-0.52	0.39	-2.23*	1.23
Location	-3.29***	1.14	0.49	2.95
Price	-0.05***	0.01	-0.09***	0.02
Status quo	-6.32***	0.67	-12.97***	4.04
Conditional heterogeneity				
Oyster *Age	-0.02	0.02	-0.03	-0.06
Label*Age	0.02***	0.02	0.02	0.05
Label* Income	0.00	0.00	0.00	0.00
Location*Age	-0.07***	0.02	-0.21***	0.07
Location *Education	0.22***	0.07	0.09	0.16
Heterogeneity in mean				
Oyster mushroom variety	0.88***	0.22	1.66***	0.45
Shiitake mushroom variety	1.48*	0.21	2.29***	0.57
Frozen mushroom	0.76***	0.27	2.33***	0.69
Dried mushroom	0.70***	0.23	2.65***	0.89
Canned mushroom	1.39***	0.29	1.86***	0.61
Mushroom label	0.50	0.14	1.51***	0.39
Location	2.02***	0.25	4.99***	1.01
Price	0.07***	0.01	1.54***	0.03
Status quo	7.82***	0.86	66.02***	26.36
LL	-896		-256.54	
BIC	2280		954.33	
N	3930		1770	

Note: LL-Log likelihood, BIC-Bayesian Information Criteria, N-Number of observations

Willingness to pay

The willingness to pay values are represented in Table 5. The results show that both men and women consumers are willing to pay a premium of GH¢32 and GH¢24, respectively for mushrooms with a location attribute, suggesting that location is an important factor that consumers of mushroom consider before purchasing them. The men consumers are also willing to pay about GH¢11 for the oyster mushroom variety. The women consumers on the other hand have discounted the shiitake mushroom variety and mushrooms that are frozen. Specifically, they discounted shiitake mushroom variety by about GH¢8 and GH¢22 for frozen mushrooms.

Table 5: Willingness to pay estimates

	Men-ML correlated		Women-ML correlated	
	Mean	SD	Mean	SD
Oyster mushroom variety	10.91***	64.00	5.92	78.09
Shiitake mushroom variety	-6.06	74.94	-8.22***	151.36
Frozen mushroom	10.04	42.04	-21.71**	178.68
Dried mushroom	19.28	265.80	-17.84	140.69
Canned mushroom	20.71	84.71	-13.65	121.16
Mushroom label	2.57	62.02	-7.74	94.10
Location	31.55***	1104.58	24.38***	727.30

Note: SD-standard deviation

CONCLUSION

This paper investigated sampled consumers preferences and willingness to pay for mushrooms in Ghana on gender basis. Using the mixed logit modelling technique, we found that men consumers have negative utility towards oyster mushroom compared to straw mushroom. They also preferred locally produced mushrooms that are cheap compared to locally produced mushrooms that are expensive. The women consumers also had preferences for shiitake mushrooms that are sold frozen compared to fresh mushrooms. The findings further revealed that the older men and women mushroom consumers prefer locally produced mushrooms to imported mushrooms. The findings suggest that there is ready market

for locally cultivated mushrooms in Ghana, however, the mushrooms must be affordable. It is therefore recommended that government invests in cost effective cultivation techniques for the mushroom industry in Ghana. It is also recommended that the value chain for the mushroom industry be developed to ensure that mushrooms would be readily available to consumers. Furthermore, there should be awareness creation on the various types of mushrooms available on the Ghanaian market and their nutritional value.

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SCIENTIFIC PAPER

GENDER DYNAMICS IN CONSUMER PREFERENCES AND WILLINGNESS TO PAY FOR EDIBLE MUSHROOMS IN GHANA

Péter Emőke-Katalin

Sapientia University, Faculty of Economics, Socio-Human Sciences and Engineering
Department of Economic Sciences, Libertății square no.1, Miercurea Ciuc, 530104 Romania

Mobile: +40-744-154-956

Abstract: *Agriculture plays an outstanding role in Romania, since there are nearly three and a half million small farms operating in the country, accounting for almost 90% of the total number of farms, and scarcely more than 32% of the available farm land is cultivated by 35% of the population. In the settlements found in the catchment area of Csíkszereda, the majority of farms consist of family farms smaller than 5 hectares. The marketing of good quality products made from local raw material by traditional methods contributes to the sustenance of the family farms. Researches show that as a result of the education of the farmers on a local level more and more processed products appear in the markets of Csíkszereda town. Farmers involved in the local market intend to expand their farms on the long run. The respondents consider that "a piece of land can be sold only once", that is why the sustenance of the farm became the main goal of multi-generational effort. Younger farmers are usually more educated and more open to innovation. The vast majority of farmers under 45 find it important to market their products through rural tourism and they are also more eager to join producer groups. Young farmers need to merge traditional methods and knowledge inherited from previous generations with modern opportunities and methods that facilitate production and marketing. Knowledge gained this way makes it possible for small farms to market their products through short supply chains.*

Keywords: *producers, farmers' vision, qualifications, data mining*
(JEL Classification: *Q12,Q13*)

INTRODUCTION

The importance of short supply chains is underscored by the fact that a significant proportion of food today reaches the consumer through such short supply chains (Committee of the Regions, 2011). Supporting and researching local short supply chains from an economic, social, and legal perspective can bring about the innovative and structural boost of the agricultural sector. Local producers participating in short supply chains might market their products at a higher price (Tanase et. al.,2015). The participants in short supply chains – the producers and the consumers- usually have similar demands, as well as comparable cultural expectations and customs. Moreover, they are in close geographical proximity, consequently this type of sales channel offers numerous possibilities for farmers living in the catchment area of Csíkszereda. The aim of the research is to find out how the farmers' archaic and acquired knowledge influences their attitude toward the market and their future economic decisions.

LITERATURE REVIEW

According to the international literature on short supply chains the popularity of producer markets is on the rise despite high prices practiced by producers manufacturing premium category products (Benedek et. al. 2013). Environmentally conscious consumers pursue this type of purchasing experience, and the direct contact with the producer established this way forms the basis of support for

local producers. Meeting the changing consumer demands requires above average educations (Juhász, 2012). Analyses focusing on products marketed through short supply chains reveal that the quality parameters of products are regarded to be an important factor – consumers consider that food purchased in local markets are fresher and more delicious. This contributes to the increasing trends in the number of local markets in the United States of America (Brown, A., 2002, Bullock, S., 2000).

It is likely, that the income realized by selling local products through short supply chains remains in the village/settlement because the local producer will probably spend his/her income at home. Research carried out in London proves that small shops and restaurants in the neighborhood of local markets selling local products experienced an increase in their income. The reason lying behind this phenomenon is that customer behavior entails the extension of shopping to small shops in the area. Shop assistants, on their turn, also become consumers of market area services (Taylor et al. 2005). Furthermore, experience with well-established German (Chiemgauer) and Swiss (WIR) local currencies shows that mean of immobile monetary substitute (local currency) increases the amount of money remaining in area and strengthens local economy (Varga, 2016a; Varga, 2017). The possibility for catch up of the micro-regions located mainly on the periphery can lie in short supply chains (OECD,1995). This channel of food provision is expanding even in more developed regions. In today's food production the socio-economic effects related to food quality become more and more prominent. Such supply chains exercise a more moderate impact on the environment than traditional chains, since the methods of production and distribution are more environmentally friendly, although this varies from product to product. Food kilometers include numerous other factors because apart from noise pollution the probability of accidents and traffic jams is also multiplied. These negative externalities can generate social problems as well.

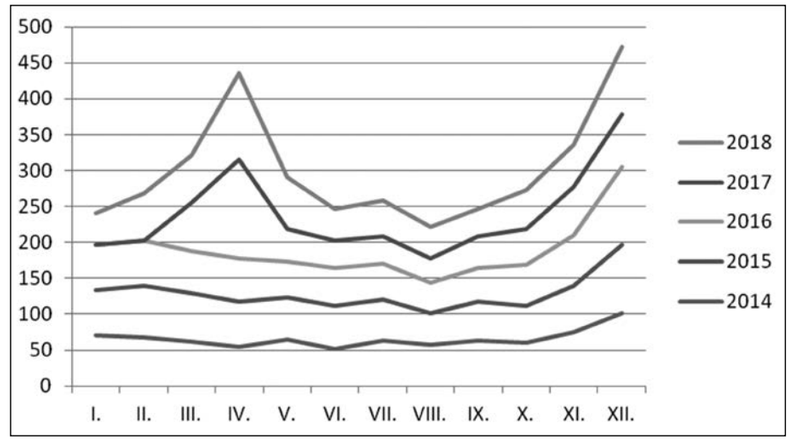
The participants in short supply chains are usually small farms which can hardly produce any goods for export after providing for local consumers (Szabó, 2017). From the perspective of consumers and producers, short supply chains might be the solution for the pile of problems caused by traditional food industry (Benedek, 2014). The solution is even more optimal

provided that not only the goods but also financial aspect is a "local product", namely, a local currency, and in this way the purchasing power remains on the spot (Varga, 2016b).

Markets today

In support of local farmers, as a national peculiarity, the Agricultural Chamber of Hargita County organized for the first time in 2009 the exhibition and market of traditional, local goods in Csíkszereda. The goal of this singular initiative was to assure a new marketing opportunity and livelihood for local farmers and producers. The unconcealed ambition of the administrative body operating as an umbrella organization was to encourage consumers to purchase local goods. The overwhelming success of the initiative is reflected by the growing interest in local markets. Maintaining the initial success, a local market takes place in Csíkszereda on the third Saturday of every month, and apart from this, there is a demand for a similar market in Székelyudvarhely on the fourth Saturday. Gradually, the local councils became involved in this initiative, so an increasing number of villages organize their own markets, which leads us to conclude that there is an increasing demand on the part of local producers for this type of local distribution facility. Emboldened by the success of the monthly markets, the initiators started to organize seasonal markets as well (Figure.1.). On these thematic (autumn, spring, Christmas, apiculture) markets and exhibitions the visitors are welcomed with a wider range of products and a two-day cultural program.

Figure.1.
Producers participating on the local market broken down on an annual basis



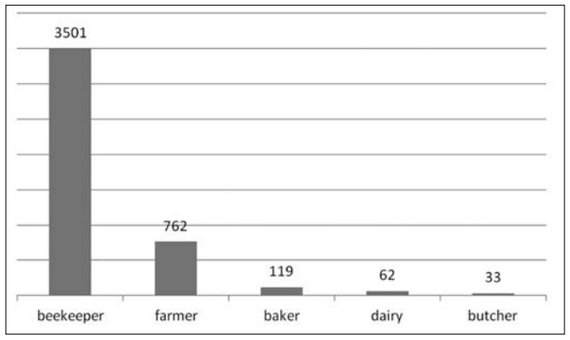
Source: own elaboration based on data provided by Hargita County Council

The success of the monthly and seasonal markets can be measured by the increasing number of farmers present at these events. Eastern and Christmas markets are outstandingly popular, but similar marketing opportunities attract more and more producers as well.

As early as in 2000, the Agricultural Chamber of Hargita County started courses for local farmers where they could acquire methods of processing agricultural products. Graduates of these courses are keen to market their products at the monthly markets. Between the years 2000 and 2018, more than 3400 beekeepers (Figure 2), 760 agronomists, more

than a hundred bakers, and about 60 dairy processors and cheese makers acquired the secrets of the trade.

Figure.2.
Training courses organized by the Hargita County Council by professions, between the years 2000-2018



Source: own elaboration based on data provided by Hargita County Council

MATERIAL AND METHODS

The questionnaire survey was carried out between December 2016 and February 2017. Our respondents were farmers from Hargita county living and producing agricultural products in the catchment area of Csíkszereda, who were involved in marketing their products in local markets. The questionnaire included open-, closed and multiple choice questions. The questions concerning the farms were formulated so that we were able to estimate the family farms of local farmers. Data related to marketing agricultural products were obtained by means of Likert scale, processed with SPSS programme, and the relationships across the variables were scrutinized through cross stable analysis. Data were recorded at a time agreed with the interviewees in person. We worked with a 77-item sample altogether (Péter and Illyés, 2018; Péter and Illyés, 2019).

Our research is characterized by a diversity of data due to the wide-ranging activities of the farmers in Hargita county. The quality and the quantity of the data collected required the use of data mining means because traditional statistical and regression methods proved insufficient (Péter and Illyés; 2018).

A data mining tool extracts information from data. This process is based on statistical methods and/or on Shannon's information theory (Shannon 1948). The extraction of information is carried out by artificial intelligence algorithms. These data cannot be extracted with classical statistical methods. Data mining looks for patterns in the data serving decision support preparation. The oldest classical artificial intelligence method from the toolbox of data mining is the regression method. Data mining is the extrapolation of this method because it not only forecasts numerical values, but it also handles categorization. We use the data mining tool Weka (Hall, 1998)(Witten, 2016) developed at The University of Waikato in New Zeeland.

RESULTS AND DISCUSSION

The majority of farms in our region are managed by men so there are 65 men and 7 women in our sample. 18 of our interviewees were under the age of 35, but most of farmers were over 36, out of whom 6 were university graduates, and 51 had secondary school education. At the time of the questionnaire completion, 23 farmers were managing bio-farms, and 19 further persons declared that they would rather use ecologically sound technologies.

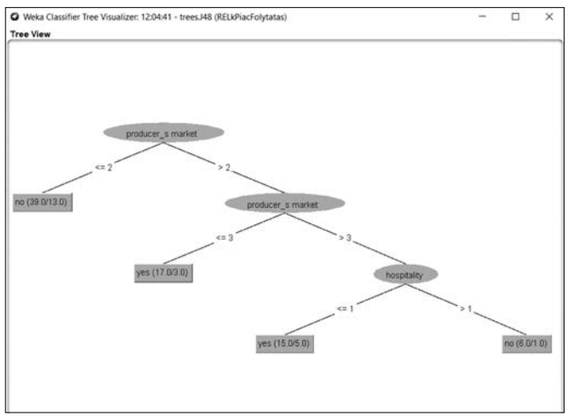
The level of education was prominent in the research. The majority of the respondents attended higher education, a tiny proportion was secondary school graduates, and only a quarter had primary school education. During the personal interviews, the farmers emphasized the importance of other forms of education which are difficult to categorize, reporting that they missed the final exam at the end of the course. The market presence of human capital at an adequate level and quality is a necessary condition for economic growth (Kelemen and Kollár, 2007)

After clarifying the data, for the sake of transparency we chose to use decision trees, which is a branch of artificial intelligence providing field specialists with interpretable information.

Classifier J48 is a Java script variant of classifier C4.5 (Quinlan, 1993). The categories of belonging to an informal group and that of the processed products were highlighted because respondents frequenting local markets emphasized the importance of these factors. The results of this method also underscore the attitudes of small-holder farmers in our region towards agricultural labour. Our analysis sheds light on the importance of family tradition-based product processing, and the outstanding role played by belonging to different producer and marketing groups in everyday life.

In what follows, we analyze the statistical distribution of attributes considered important by the models.

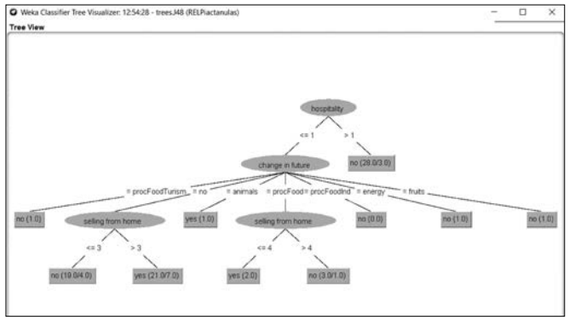
Figure.3
The category of Informal Cooperation represented by means of reduced attribute clustering



Source: own analysis

If the informal cooperation is the class attribute, and from the perspective of the respondent the importance of the producer market is at least average (2 or 3), this indicates that farmers are eager to join different producer groups and are inclined to exploit the advantages of the cooperation. At the same time we can say that if the importance of the producer market is salient for the farmer (>3), and s/he considers hospitality industry to be important (>1), than s/he tends to rely less on the opportunities offered by informal cooperative groups.

Figure.4
The class is processed food – the emergence of a new activity in the model



Source: own analysis

From the perspective of processed food, provided that the hospitality industry is important for the farmer, s/he will not focus on processing the product. Furthermore, if hospitality is not a priority for the farmer, his/her decisions related to food processing will be determined by the emerging new activity. If the new activity is food processing, fruit growing and tourism or maybe energy production, this indicates that the farmer has not activated in the processing industry yet. These are small, special cases named outliers requiring a different approach. Another special case is when the farmer shifts to livestock breeding and processes the products right away.

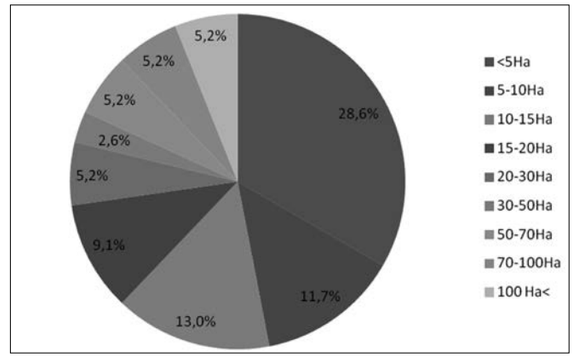
In case the farmer is not considering starting a new activity and he would like to market the products directly from home in the future, and the importance of this project is rated higher than (3) on the Likert scale, then the main activity of the farm will remain food processing. This is the main branch of the tree, the one determining the model the most, including 40 cases with 11 errors (predicting such cases with a 72.5% precision).

In case the farmer is considering starting food processing in the future, if marketing from home is very important (>4), then processing the products is not so important for him/her. These cases affect only a few individuals (3, out of which 1 is the error), which might be explained by the farmers' prioritising the processing better quality and a wider range of products as a result of the courses attended.

The data of the 2010 Agricultural census sheds light on the features of the Romanian tenure system. More than 98% of the farmers cultivate a farmland smaller than 10 hectares. The tenure system of our region is mostly characterised by fragmented small-scale farms (Figure 5), a phenomenon reflected in the samples.

35% of farmers with higher education cultivate farmlands bigger than 20 hectares, which –considering the geographical endowment and the tenure system possibilities of Hargita county –count as relatively prominent-scale farms. Farmers whose families invested more in training offering a higher level education for their offsprings, cultivate bigger farmlands or they farm more intensively (Nyitrai F. 2001). The economic growth achieved by these respondents is outstanding in our region.

Figure. 5
Distribution of respondents according to size of farmland



Source: own analysis

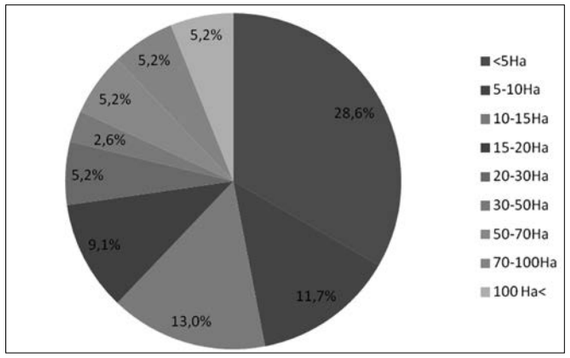
The respondents' vision of the future of economy is very diverse. 21 interviewees would like to expand their farm, 6 of them would rather reduce it, and only one is considering liquidation. Fortunately, most of the farmers, over 62% of the respondents would like to continue farming, and their goal is to sustain their present farms (Figure 6). Over half of the farmers with primary education are planning to sustain their farms in their present shape and size. None of the farmers with a higher education degree is contemplating the liquidation or the transmission of the farm.

68,6% of the farmers with secondary education degree claim that they are aiming at sustaining their farms in its present state, 27,5% of them is considering expansion, and only 2% are planning reduction. Some of our respondents aiming at sustaining their farms would like to reduce them, a wish motivated by a great deal of emotional charge and attachment. A very deep appreciation of farmland belonging to the family heirloom impedes liquidation or selling in the farmer's lifetime (Nábrádi et al.,2016). The respondents emphatically voiced the attachment of the family members to the family land, therefore land sale comes into discussion only after great family tragedies, as a last resort. I was glad to hear that none of the farmers belonging to this group would like to liquidate their farm, perhaps they would hand it down.

22,2% of the farmers between the age of 18-35 would like to expand their farms, nearly three quarter of them would like to sustain them at the present level, and only 16,7% is planning reduction. 34,5% of the farmers between the age 36-45 wants to expand their farms, although the majority

aims at maintaining the present situation. 6,9% would like to reduce, while 3,4% wants to liquate their farms. Only 20,7% of the farmers between 46-65 want to expand their farms, in contrast, 65,5% try to maintain the present situation on every account. 10,3% want to reduce them, and 3.4% are considering transmission. This experienced age group is exceptionally attached to their farms, so they don't even take liquidation into account. Farmers falling into the older age group, those over 66 are thinking about expansion.

Figure.6
Distribution of farmers according to future plans



Source: own analysis

The participants in short supply chains, both the producers and the customers usually have a higher level of education (supposedly the customers' income is also more consistent). It is an advantage for the producer (seller) to possess higher education qualifications, expertise, broad-mindedness, and flexibility when exploring new markets (Benedek et. al.,2013).

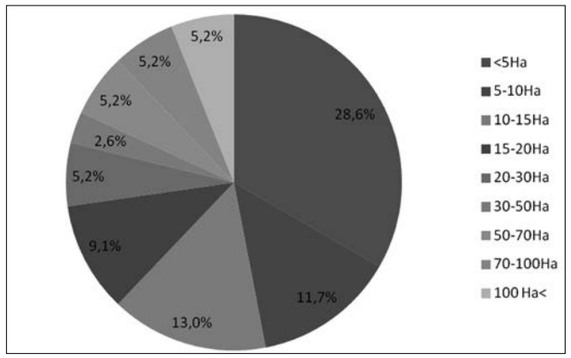
The cross table analysis of the respondents' level of education and age reveals that 11% of young farmers under the age of 35 featuring in the sample possesses higher education, and 61% have secondary school education. 69% of the interviewees between 36-45 have secondary-, 6,9% of them have higher-, and nearly a quarter have primary education.

Just as in any other field of activity, positive models play an important role in agriculture. The ancestors of 74% of our respondents were also farmers. High level specialist education based on traditional knowledge coupled with adequate financial capital, competence and creativity is the foundation for livelihoods in one's homeland.

Due to the natural assets, the historical and cultural traditions of Csíkszereda town and its surroundings, the tradition of agricultural labour is inherited across generations, and it has become of paramount importance in present-day employment to such an extent that nearly one third of the population is related to this branch. Recognizing the presence of uncertainty factors pertaining to the branch, such as weather changeability and the perishability of the products, the majority of the small-holder farmers from the catchment area of Csíkszereda town were looking for solutions in the establishing of inner coordination (Fertő, 1996). The majority of our respondents do not consider wholesale market to be important because they would not like to share the income. Thus, intermediaries can be avoided and both the producer and the consumer can benefit from the extra profit generated this way (Erudito Zrt., 2012). Stable quality products in demand among the consumers can be easily assured with this method (Kiss, 2018).

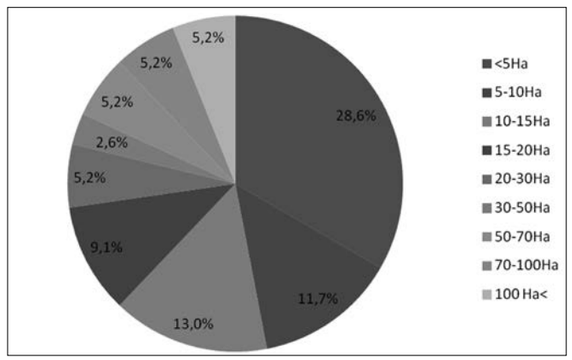
Hospitality as a novel marketing channel is becoming more and more attractive for farmers. For 1,3% of our respondents it is very important, and for 5,2% it is rather important, while for 13% it is moderately important, and for the majority it is not or only slightly important (Figure 7).

Figure 7.
The importance of the hospitality industry and rural tourism
Source: own analysis, year: 2018



Similarly to most socialist countries, in Romania cooperatives were replaced by private farms. In most cases, landowners started farming with insufficient expertise and scant financial resources. This is reflected in the large number of small farms (Figure 8). Nearly 90 % of the declared farms belong to the group of small farms. At the same time, the employers account for more than two thirds of the total number of agriculture workers, and more than 30 % of the livestock is kept in such farms (Kemény and Rácz,2017).

Figure 8.
Distribution according to importance of cooperation



Source: own analysis, year: 2018

More than half of the respondents were not open to cooperation, 15,6% considered it moderately important, while 2,6% thought that some type of cooperation among farmers was very important. Being aware of the anti-cooperatives attitude, we included in our interview a question pertaining to informal cooperation eliciting nearly as many refusals as positive responses. The cross table analysis reveals that the majority of the farmers with a higher education qualification, more than half of those with a secondary level of education, and almost 60% of those with a primary education level were glad to join a group based on informal cooperation.

Nearly one third of the respondents run their farms with the active contribution of 2 family members, a quarter of them have 3 family members in the business, and in some cases (12%) there are 4 members of the family. Apart from the family, farmers also appeal to casual workers. 72,7% of the respondents claimed that they employ casual workers. 73,3% of the farmers with one active family member would like to sustain their farms, 20% would like to expand it. 55,2% of the respondents with two active family members would like to maintain the present shape of their farms. 66,7% of the farms with three family members, 55,6% of the farms with four family members, and 75% of the farms run with the help of five family members are planned to be maintained in the future. The farmers included in our research feel responsible for the family members involved in the business, and they are striving to maintain their farms

CONCLUSION

We analyzed the future opportunities of the mostly self-sustaining small farms existing in the mountainous agricultural lands of the region. In the present study I looked at producer small-scale farms, which – relying on the available traditions – are eagerly trying to adjust themselves to new consumer demands.

Our research reveals the positive relationship between education and implication in direct marketing channels. Qualified farmers cultivate larger farmlands, and they envisage the continuation of farming in the future. Furthermore, highly qualified farmers are open to different forms of cooperation thanks to their broad-mindedness.

Today, the multitude of small-scale farms characterizes the agricultural branch in Romania including the catchment area of Csíkszereda town. The basic orientation of the respondents' future plans with their farms coincides with the possibilities described in the specialist literature (Thomson and Davidova, 2014), namely expansion, continuation, and sustenance are mentioned as viable perspectives. The cross generational attachment to the farmlands becomes apparent to such an extent that the sustenance future plan does not only include the well-known expansion tendency, but the farmers can also plan their future based on the reduction of the farm.

Looking for the causes of reduction we asked our interviewees to relate the story of their failure, and we came to the conclusion that the farmers would have a purposeful vision entailing economic growth provided they had adequate knowledge and information. If small-scale and food producer farmers realized the importance of life-long learning and they had the opportunity for the constant presence of an organization offering expert support, they could adjust themselves more easily to the economic challenges posed by changing demands, and thus they could also greatly contribute to the future of our region.

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SCIENTIFIC PAPER

THE STATUS OF AGRICULTURAL FINANCING BY COMMERCIAL BANKS IN ZIMBABWE

[1]Blessing Ropafadzo Chigunhah, [2]Ezekia Svotwa, [3]Tendai J. Mabvure, [4]Gerald Munyoro, and [5]Lovemore Chikazhe

[1]Graduate Business School, Chinhoyi University of Technology, Zimbabwe
[2]Department of Crop Science and Post-Harvest Technology, Chinhoyi University of Technology, Zimbabwe
[3]Department of Accounting and Finance, Chinhoyi University of Technology
[4]Graduate Business School, Chinhoyi University of Technology, Zimbabwe
[5]Department of Marketing, Chinhoyi University of Technology, Zimbabwe

[1]blessingmhere@gmail.com
[2]esvotwa2@gmail.com
[3]jmabvure@cut.ac.zw
[4]geraldmunyoro@hotmail.com
[5]chikazhelb@gmail.com

Abstract: *Agricultural finance is indispensable for enhancing productive capacity in both small-scale and commercial farming. This study sought to establish the current status of agricultural financing by 12 registered and operational commercial banks in Zimbabwe in the year 2019. Questionnaires and interview guides were used to collect data. SPSS and NVivo were used for data analysis. All the commercial banks participated in agricultural financing with an average agricultural loan portfolio of 30%. However, their participation in agricultural lending is yet to reach the pre-land reform maximum of 91.3% attained in 1999. Land tenure and weather risks, as well as lack of collateral among farmers reduced the banks' appetite for lending to the agricultural sector. The majority of the commercial banks offered value chain finance, invoice finance, overdraft facilities, and term loans to agricultural sector clients that mainly included; suppliers, medium-scale, and large-scale commercial farmers. The study established a mismatch in the demand and supply of loans in the medium to long term tenure range of 1 to more than 3 years. There was low demand for 1-3-year tenure loans according to the commercial banks, and a corresponding deficit in the supply of highly demanded longer-term loans of more than 3 years for capital expenditure (CAPEX). Therefore, government should aim to; stabilize currency; arrest hyperinflation; restore economic stability; address land tenure to ensure the bankability of the 99-year Lease; and create an environment that is conducive for investment in climate and weather resilience infrastructure. Local farmers should also invest in human and physical capital to improve their access to bank credit.*

Keywords: *agricultural financing, capital formation, collateral, risk, term loans*
(JEL Classification: *Q14*)

BACKGROUND

Agriculture is the largest sector in developing countries that is capable of generating the savings mass required for capital investments in other economic sectors to stimulate economic growth (Anríquez and Stamoulis 2007). However, early classical theory advocated for the reallocation of factors of production from such primary sectors that are characterized by low productivity, traditional technology and decreasing returns, to modern industrial sectors like manufacturing and services with higher productivity and increasing returns (Adelman, 2001). Agriculture was thus branded as a passive contributor to development, which did not deserve investment (Huang and Ma 2010). By neglecting agricultural sector investments, several countries like Argentina, Mexico, Nigeria, and the former Soviet Union encountered slowed development and failure in the long-run (Timmer, 1988). On the contrary, Japan, China and Korea registered growth and

entered the ranks of developed nations by heavily investing towards agricultural development (Huang and Ma 2010). Intense investments in agriculture by African countries like Burkina Faso, Rwanda, Kenya, Cote d'Ivore, Ghana and Ethiopia also triggered productivity increases in existing farms by 6% annually, and average annual GDP growth in excess of 4% (Alliance for Green Revolution in Africa (AGRA), 2018). Hence, according to AGRA (2017), no region in the world has successfully developed a diverse, modern economy without initially establishing a successful foundation in agriculture.

Agricultural economists consequently shifted their attention towards the role of agriculture in rural development, where the majority entirely rely on agriculture for livelihoods (Diao, Hazell and Thurlow 2010). Besides, several world development bodies are now advocating for increased financial investments in the agricultural sector. The World Bank (2015) declared the need for $80 billion annually in developing countries to eradicate poverty, whilst AGRA (2018) proposed that US$30 to US$40 billion is required annually over the next decade to transform African agriculture and create vibrancy. However, only 1% of commercial lending is earmarked for the agricultural sector in developing countries (International Finance Corporation (IFC), 2014). Moreover, only a quarter of loans advanced in Africa, south of the Sahara, originated from a bank (Fan et al. 2013). Agricultural financing challenges are also rife in Zimbabwe, a landlocked country that depends on primary economic activities like agriculture and mining (United Nations, 2014). Despite being central to livelihoods and the economic progress of the nation at large, the Zimbabwean agricultural sector faces financing challenges, particularly access to bank credit. When the potential demand for credit in agricultural projects was between US$437 million and US$549 million in the year 2010, commercial banks only availed US$326 million, resulting in a US$223 million shortfall to the existing customer base (Vitoria, Mudimu, &Moyo, 2012). However, the availed US$326 million credit is purported to have generated approximately US$2 billion worth of agricultural output.

Loans to the agricultural sector also comprised only 19% of the US$3.8 billion availed by the banking sector since the adoption of a multi-currency system in 2009 (Farm Mechanization and Conservation Agriculture for Sustainable Intensification (FACASI), 2015). Commercial banks' average agricultural loan portfolios became subdued in the post- land reform period (after the year 1999) compared to the pre and post-independence period (between 1975-1999), as they fell below the 20% threshold recommended by the Reserve Bank of Zimbabwe (RBZ) (2006, 2016, 2019). Such low financial investments in agriculture by banks are attributed the exposure of the agricultural sector to weather vagaries, low or no collateral by the farmers due to the insecurity of land tenure, market and price risks, political interferences, weak legal systems, and harsh economic conditions in the country (Masiyandima et al. 2011; Nyamutowa and Masunda 2013; Vitoria et al. 2012). Access to agricultural finance is a major stimulus for agricultural development, whose deficiency is a constraint to productivity and income generating opportunities for rural farm households (Qwabe, 2014). The International Finance Corporation (IFC) (2014) underlined the role of agricultural finance in enabling farmers to adopt inputs and technologies that enhance their productivity, income and livelihoods. Financial capital is also required in every step of agricultural operations from land preparation, planting the crop, harvesting, to post-harvest handling, and in establishing start-up agricultural enterprises (Goeringer and Hanson, 2013).

According to Lee et al. (1975), agricultural finance is the economic study of the acquisition and use of capital in agriculture, which deals with the supply and demand for funds. It deals with the financial aspects of a farm business, encompassing both the macro and micro finance aspects of an agricultural economy (Pandey, 2008). According to the IFC (2015), agricultural finance should be perceived as the full range of financial activities involved in getting agricultural products and services through different production phases until they are delivered to the final consumers. In this study agricultural finance is perceived as the provision of diverse financial services like loans, leasing, payment services, savings and crop and livestock insurance by banks for agricultural production, processing and marketing, taking the full view as defined by the IFC (2015). A few studies (Masiyandima, Chigumira and Bara, 2011; Vitoria, Mudimu and Moyo, 2012; FACASI, 2015) have explored the participation of banks in agricultural financing in Zimbabwe. However, there have been a few, if any, updates on the current status of agricultural financing in Zimbabwe, especially under the current economic hardships that the country is facing during austerity measures. This study, therefore, seeks to explore the status of agricultural financing by commercial banks in Zimbabwe, focusing more on the supply of term loans to the sector.

MATERIALS AND METHODS

The study was underpinned by the pragmatism research philosophy, which advocates for the use of mixed methods in research. Therefore, both quantitative and qualitative techniques were employed in undertaking the study. The study was conducted between August and December 2019 in Harare, the capital city of Zimbabwe where all of the targeted commercial banks' head offices are located. A cross-sectional survey of 12 registered and operating commercial banks in Zimbabwe was done to establish their involvement in agricultural financing, and the magnitude of their participation in terms of total loans that they advance to the sector. Moreover, in light of the general postulation by existing theory that banks are reluctant to lend to the agricultural sector, the study sought to probe the local commercial banks' perceptions on the reasons put forward for that position. Lastly, the study sought to establish the local commercial banks' targeted clientele and the various agricultural financing tools that they offered to them. All

the 12 commercial banks were targeted as part of the study's sample. A pre-tested structured questionnaire, which was interviewer administered, was used to collect quantitative data. A pre-tested semi-structured interview guide was also used to collect qualitative data for the study. Bank credit officers who worked in the commercial banks' agribusiness units were the targeted respondents for the study. The Statistical Package for Social Sciences (SPSS) Version 26 was used to analyse the quantitative data making use of descriptive statistics, mainly frequencies. On the other hand, NVivo Plus 12 was used to analyse the qualitative data, making use of thematic analysis. Tables and figures were used to present both the quantitative and qualitative findings from the study.

RESULTS AND DISCUSSION

Out of the 12 targeted bank credit officers, each from the 12 operating registered commercial banks in Zimbabwe, only 8 participated in the questionnaire survey. The study therefore achieved a 67% response rate. On the other hand, data saturation, a point where no new knowledge was being generated from the interviews (Rodrigues et al., 2017), was reached after interviewing 7 bank credit officers. Consequently, a total of 7 commercial banks participated in oral interviews. However, in spite of scoring a lower questionnaire response rate than desired, the researcher was satisfied with successfully obtaining cooperation from more than half of the operational registered commercial banks in the country. Moreover, the use of interview guides to collect qualitative data for complementing the quantitative data helped the researcher to access richer and in-depth data pertaining to various aspects of interest on the status of agricultural financing in Zimbabwe.

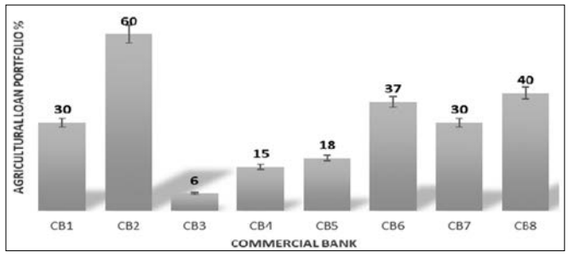
Commercial Banks' Participation in Agricultural Financing in Zimbabwe

All the 8 commercial banks that participated in the study revealed that they were involved in agricultural financing in Zimbabwe. Several studies (FACASI, 2015; Vitoria et al., 2012) also confirm the participation of most commercial banks in agricultural financing in Zimbabwe. However, these studies revealed that the degree or intensity of participation in agricultural financing is the one that varies across individual banks, an aspect that is addressed in the ensuing sub-section.

Magnitude of Agricultural Financing by Commercial Banks in Zimbabwe

Actual lending to the agricultural sector differed across individual commercial banks in Zimbabwe according to the findings of this study (Figure 1). Commercial bank 2 (CB2) had the highest agricultural loan portfolio of 60%, whilst CB3 had the least agricultural loan book of 6%. CB1 and CB2's bank credit officers revealed during their oral interviews that agricultural lending formed their largest business portfolios. These findings contradict Vitoria et al. (2012)'s study, which revealed that besides the government owned Agribank that had an agricultural loan book of 83%, all the other commercial banks in Zimbabwe dedicated less than 50% of their loans to the agricultural sector. However, higher agricultural loan portfolios exhibited by CB2, CB6, and CB8 may be attributed to their intensified participation in government driven credit programs like Command Agriculture. Besides, the timing of the study's data collection exercise coincided with the start of the normal farming season in Zimbabwe (September-October) when banks would be disbursing more loans to the agricultural sector.

Figure 1: Commercial Banks' Agricultural Loan Portfolios



Source: Primary Data (2019)

The average agricultural loan portfolio across the commercial banks translated to 30%, which almost coincided with the average agricultural loan portfolio of 31.69% reported by the RBZ in its last Quarterly Economic Review of 2019 (RBZ, 2019a). These findings also surpass the average agricultural loan portfolio statistics for local banks presented by the RBZ since the post-land reform period, which mostly ranged below its recommended threshold of 20% (RBZ, 2006, 2015, 2016, 2017). However, the 30% average agricultural loan portfolio established in this study is still comparatively lower than the pre-independence period's agricultural loan books for most commercial banks. For example, in 1970 and 1975, commercial banks' average agricultural loan portfolios stood at a higher 47.8% and 47.3% respectively (RBZ, 2006). The post-independence agricultural lending, which completely doubled from 26.1% in 1980 to 55.1% by 1995, and trebled to 91.3% by the year 1999 (RBZ, 2006), also shows that commercial banks were more dedicated to agricultural sector investments. Similar to this study's findings, Masiyandima et al. (2011); Richardson (2005) and Vitoria et al. (2012)'s studies also established that local commercial banks were reluctant to heavily invest in agriculture like they did before the attainment of independence, and before the Fast Track Land Reform (FTLRP) in the year 1999. The commercial banks' demonstrated reluctance to lend to the agricultural sector is addressed in the next section.

Reasons for Low Financial Investments in Agriculture by Commercial Banks in Zimbabwe

The commercial bank credit officers were asked the extent to which they agreed that several reasons postulated in literature contributed to their banks' relatively lower financial investments in the agricultural sector compared to the pre-FTLRP period (Table 1).

Table 1: Reasons for low financial investments in the agricultural sector by commercial banks in Zimbabwe

Reason	Percentage of Banks				
	Strongly Agree	Agree	n=8 Neutral	Disagree	Strongly Disagree
Agriculture is too risky	37.5	50	0	0	12.5
Farmers lack acceptable collateral	37.5	25	25	12.5	0
Lending rates are unprofitable	25	0	0	50	25
Mismatch between deposits received and loans required	25	25	0	50	0
High transaction costs of servicing farmers	0	25	0	62.5	12.5

Source: Primary Data (2019)

a) Agriculture is too risky

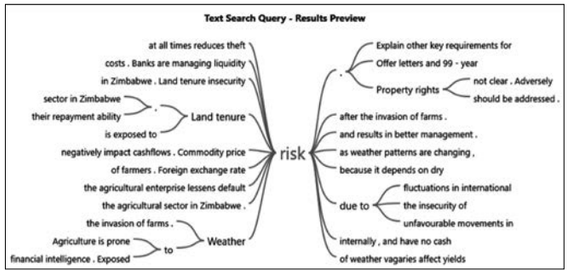
The majority of the commercial banks (87.5%) agreed that agriculture was a very risky sector to invest in (Table 1). However, only a few (12.5%) banks disagreed with this statement. The issue of agricultural sector risk also emerged as a major theme in the study's qualitative data analysis findings (Figure 2). The word risk was mentioned for 13 times by 5 (CB1; CB2; CB3; CB4 and CB5) out of the 7 commercial banks that participated in oral interviews.

Figure 2: Word Cloud of Commercial Banks' Verbatim Responses on why Banks in Zimbabwe are Reluctant to Lend to the Agricultural Sector

Source: Primary Data (2019)

A text search query for the word risk gave a picture of what the word was linked to in the oral interview discussions with the bank credit officers (Figure 3).

Figure 3: Word tree output for the word "risk"



Source: Primary Data (2019)

Land tenure risk was mentioned for 13 times by 5 bank credit officers as a hindrance to the financing of agriculture in Zimbabwe (Figure 3). According to CB1, "Government policy on land tenure exposes the banking sector to risk because a few farmers have 99-year leases and the property rights are totally unclear." These findings are confirmed by Richardson (2005), whose study revealed that former white commercial farmers who possessed secure freehold land titles to their farmland had unparalleled access to bank credit finance before the Fast Track Land Reform compared to the new indigenous farmers. Another study by Mohamed (2003) on smallholder farmers and artisanal fishermen in Zanzibar, Tanzania, also revealed that the lack of title deeds among the farmers accounted for their non-qualification for bank loans as the banks tried to cushion themselves against the land tenure risk.

Weather risk is another key theme that emerged from the study's interviews with the commercial banks' credit officers (Figure 2). The word "weather" was mentioned for 6 times by 5 bank credit officers. The word tree output (Figure 3) shows that commercial banks were reluctant to lend to the agricultural sector because of its exposure to weather risks and vulnerability to the effects of climate change and weather vagaries. According to the bank credit officers, the effect of weather and climate change was worsened by the dependence of most farmers on dryland farming or rain fed agriculture in Zimbabwe. According to CB2, "Vagaries of the weather negatively affect the farmers' yields, cash flows, and their ability to repay loans." CB3 also emphasized that prolonged droughts in Zimbabwe depleted underground water aquifers, the country's key back-up water source for irrigation during drought and low rainfall periods. Similarly, CB4 revealed that most smallholder farmers exposed banks to risk because they were into dryland farming and had no irrigation facilities, which explained why they were excluded from most credit programs (Vitoria, Mudimu and Moyo, 2012; Nyamutowa and Masunda, 2013; United Nations, 2014; Ruete, 2015). The resultant infrequent or seasonal repayment of loans by farmers exposed to such weather risks repelled banks from making financial investments in the sector as shown by this study.

CB2 also mentioned other risk factors of investing in the Zimbabwean agricultural sector like shifts in exchange rates,

depressed international and local prices, which also negatively affected the farmers' revenues, profits and loan repayment ability (Figure 2). In addition, CB2 revealed that farmers who depended on importing their key production inputs also faced increased production costs from unfavourable movements in exchange rates, equally affecting their revenues and loan repayment capability. These findings are confirmed by the House of Lords European Union Committee (2016), which asserts that farmers, especially smallholders, are vulnerable during low price periods because they lack financial resources to cushion themselves. According to Jainzik and Pospielovsky (2014), such risks attached to output price volatility in agricultural production tend to affect many borrowers at the same time, a scenario that repels financial investors like banks as confirmed by this study. However, some studies contradicts these findings by propagating that not all price variations are problematic to the agricultural sector, but only become so when they are large, cannot be anticipated and do not reflect market fundamentals (FAO et al. 2011). According to Davis (2011) some actors in the agricultural sector actually realize benefits from increased intra-annual food prices, which enable them to recoup their operational costs. The researcher is however yet to come across literature that directly links high commodity price periods with increased bank credit supply to farmers in the developing world context.

Liquidity risk was also discussed as another cause of limited financial investments in agriculture by banks in Zimbabwe (Figure 2). According to CB2, "Depositors have generally lost faith in the banking system as a whole, and are therefore not willing to make long-term deposits that can be advanced to deficit units like agriculture. As a result, banks are competing aggressively for offshore financing, which is in most cases difficult to access because of the negative perceptions facing the country due to political and economic instability after the land reform program." CB2 therefore argued that it may not be a matter of choice that agriculture is not receiving the level of financial investments that it deserves as the pillar of the Zimbabwean economy, but that banks themselves are not liquid enough to lend as much as possible to the sector. Vitoria et al. (2012) confirm that liquidity constraints have affected most banks' agricultural loan books, thus restricting credit to the sector. Similarly, the United Nations (2014) avers that liquidity constraints prevail within the local financial markets, and have resulted in high and uncompetitive interest rates.

b) Local farmers lack acceptable collateral

The majority (62.5%) of the commercial banks under study agreed that they were reluctant to lend to agriculture in Zimbabwe because local farmers lack the acceptable collateral (Table 1). However, 25% of the banks were neutral whilst 12.5% disagreed with the statement. This shows that most local commercial banks are reluctant to finance the agricultural sector in Zimbabwe because local farmers lack acceptable collateral. Masiyandima et al. (2011) support these findings by revealing that the land offer letters held by most farmers in Zimbabwe are not recognized as proof of land ownership by commercial banks and cannot be used as collateral for securing borrowing. The same study by Masiyandima et al. (2011) also revealed that the lack of collateral accounts for 60% of the agricultural loan applications rejected by commercial banks in Zimbabwe, validating further this study's findings. Also supporting these findings, the Inter-Ministerial Task-Force (IMT) Technical Committee (2016), revealed that local banks are still reluctant to lend even to farmers who hold 99 Year Leases because the leases cannot be transferred to third parties in case of default, which makes them unacceptable as collateral. The Ministry of Agriculture (2013) equally avers that local commercial banks gradually withdrew their outreach in rural areas where most farmers reside, citing the main challenge of collateral in the absence of legal title to land. Moreover, Richardson (2005) revealed that the loss of property titles by new farmers in Zimbabwe limited the amount of borrowing and disrupted the banking sector as individuals could no longer pledge their property as collateral for loans. Banks consequently became wary of the possibility of losing their investments (Vitoria et al. 2012) as confirmed by this study. Beyond Zimbabwe, Chandio et al. (2018)'s study in Pakistan also confirms that smallholder farmers in the Sindh Province had limited access to bank credit because they lacked the collateral that was required by the banks.

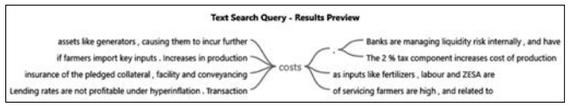
c) Lending rates are unprofitable

The majority of the commercial banks (75%) disputed that unprofitable lending rates prevented them from making financial investments in the agricultural sector in Zimbabwe (Table 1). This contradicts what has been postulated by some studies in Zimbabwe. For example, Dale (2009) revealed that during the implementation of the Agricultural Sector Productivity Enhancement Facility (ASPEF) program in Zimbabwe, banks were dictated by the government to charge interest at low and unprofitable rates of 20% per annum when inflation was running at approximately 586%, which repelled most banks from participating in agricultural financing programs. The removal of interest rate ceilings by the RBZ in the Zimbabwean financial system may help to explain the findings of this study because local banks are now at liberty to charge interest rates that they deem profitable for their lending businesses. Moreover, available literature suggests that interest rates charged by banks in Zimbabwe to the agricultural and agribusiness sectors have always been astronomical, prohibitive and only affordable to higher income earners (Vitoria et al. 2012). The United Nations (2014) also confirms that interest rates are high and uncompetitive in Zimbabwe as a result of the shortage of funds in the market. Besides, local banks are also purported to have a limited incentive to focus on the farmers' market, especially smallholders, unless it includes higher risk premiums and greater collateral (Vitoria et al. 2012).

Despite having the majority of the commercial banks disputing that lending to the agricultural sector is unprofitable, it was worthwhile for the study to discuss the minor themes that emerged from the interview discussions with the few banks (25%) that argued otherwise. Results from the questionnaire

survey show that 2 banks strongly agreed that lending rates to the agricultural sector in Zimbabwe are unprofitable (CB1 and CB2) (Table 1). Their arguments were centred on the theme of costs, whose word tree output is shown in Figure 4.

Figure 4: Word Tree Output on the emerging theme "Costs"



Source: Primary Data (2019)

Both CB1 and CB2 bemoaned that under the current hyper inflationary environment in Zimbabwe, profitable interest rates on loans charged today could easily become totally unprofitable tomorrow. Therefore, the two banks argued that it could be wiser for a bank to withhold making financial investments in the agricultural sector until economic stability is restored in the country. The issue of costs was initially discussed from the demand side (the farmer's side). According to CB1, "Over and above the financing costs like establishment fees, insurance costs of the pledged collateral, facility costs and conveyancing costs, 2% tax is also charged on all transfers as part of the government's current austerity measures." All these costs, according CB1, were deducted upfront from the loan amounts applied for by the farmers. Therefore, given the small loan amounts that the majority of famers usually sought from banks, they were left with little funds that could not make any meaningful returns when injected into their agricultural enterprises. CB1 ultimately stressed that it was not viable at the onset for the bank to lend to the farmers under such a scenario.

On the other hand, CB2 highlighted that, "Farmers are currently facing increases in seed, fertilizer, chemical, labor and utility costs like electricity and water under the prevailing hyperinflation in the country." These high costs were argued to make their agricultural enterprises less profitable, which also negatively affected their ability to repay loans. CB2 also discussed the effects of disruptions in utilities like electricity and water, which forced farmers to incur further costs by making unplanned alternative investments in solar, generators and irrigation equipment. As a result, the farmers' returns on financed projects were reduced or completely eroded. This was also purported to negatively affect their ability to repay the advanced loans. Hence, the bank argued that it was wiser for banks to withhold the financing of agricultural projects under such circumstances. These arguments by the banks showed that the increased costs faced by farmers negatively affected their income generating capacity, which also negatively affected their loan repayment ability. Mayowa (2015) and Odu et al. (2010)'s studies in South Africa and Ghana respectively, confirm that high income from farming activities is preferred by banking institutions because it acts as a guarantee/ assurance that a farmer would be able to timeously repay the loan.

d) Mismatch between deposits received and loans required

Pertaining to the presence of a mismatch between the short-term nature of deposits received by banks and the long-term nature of loans sought by agricultural sector clients as postulated by some studies in Zimbabwe, 50% of the banks agreed, whilst the other 50% disagreed (Table 1). Since half of the banks agreed that the tenure mismatch between deposits received and the loan amounts required by farmers prevented them from making extensive investments in the agricultural sector, this study recognised it as a barrier to agricultural financing by commercial banks in Zimbabwe. The Ministry of Agriculture (2013) agrees that the Zimbabwean banking sector is not able to lend to agriculture because it can only avail short-term tenure loans of less than 30 days, which are not suitable for agricultural sector needs, because 93% of the deposits it receives are subject to quick withdrawal (demand 60%; short-term 20%; savings 5% and long term 7%). Vitoria et al. (2012) correspondingly underscore that deposits in the Zimbabwean banking sector are short term and volatile in nature because approximately 90% of them relate to salary payments, thereby making it difficult for the banks to provide the longer-term finance needed for infrastructural development, leasing, recapitalization and expansion projects in sectors like agriculture without creating a serious funding mismatch. Hence, Zimbabwean commercial banks are reluctant to lend to the agriculture because they have no capacity to fulfil the sector's longer-term financing needs due to the short-term nature of deposits that they also receive.

e) High transaction costs of servicing farmers

The majority of the banks (75%) disagreed that high transaction costs deterred them from serving the agricultural sector in Zimbabwe (Table 1), whilst only a minority (25%) agreed. Hence, the study established that high transaction costs of servicing farmers do not contribute to local commercial banks' low financial investments in the agricultural sector in Zimbabwe. These findings contradict most of the available literature. According to Ruete (2015), the geographically dispersed distribution of farmers in rural areas is a repelling factor to financing by banks. Quartey et al. (2012) also confirm that many agricultural households are located in remote parts of the country and are often widely dispersed and inaccessible. This purportedly makes it difficult for financial institutions to provide cost-effective and affordable services due to higher costs of processing and servicing their unsecured small loans as postulated by Yaron (1992). Likewise, Kirui et al. (2010) confirm that the geographical dispersion of farmers and their poor organization make their monitoring costly to lenders, hence their reluctance to serve them. CB2, one of the two banks that agreed with the fact that high transaction costs of serving farmers prevented it from heavily investing in the agricultural sector in Zimbabwe, expounded that this was hinged on the problem of lack of capacity on the part of the bank. Lack of capacity pertained to the bank's inability to establish branches countrywide because of the increased overheads involved (rent, staff costs, utilities among others). Hence, the transaction costs of servicing the farmers, especially in sparsely populated rural areas, outweighed the returns that the bank could realize from serving them. CB2 further revealed that lack of capacity issues explained why the bank closed its branches in most rural parts of the country where it used to operate serving farmers before the FTLRP.

Alternative Agricultural Financing Tools Offered by Zimbabwean Commercial Banks

The findings presented in Table 2 show that 7 out of 8 commercial banks under study offered value chain, invoice financing, and overdraft facilities to the agricultural sector in Zimbabwe. Available literature confirms that value chain financing, particularly contract farming, is popular in Zimbabwe as banks attempt to manage around the land tenure and collateral risks associated with financing local farmers directly (Winn et al. 2009). Confirming the dominance of value chain financing in the Zimbabwean banking sector, Vitoria et al. (2012) also revealed that out of the US$326 million bank credit supplied by banks in the year 2010, 70% was supplied to 300 000-350 000 smallholder contract farmers of cotton and tobacco. The Zimbabwe Agricultural Development Trust (ZADT) (2017), which funds smallholder farming in Zimbabwe through the Credit for Agricultural Trade and Expansion (CREATE) fund that is mobilized through 13 financial institutions (8 banks and 5 Micro Finance Institutions (MFIs)), also reported that the majority of smallholder farmers accessed funding under its programs through value chain actors.

Table 2: Agricultural Financing Tools Offered by Commercial Banks in Zimbabwe

Type of Financing	Number of Commercial Banks Offering n=8
Value chain finance	7
Invoice finance	7
Overdraft facilities	7
Term loans	6
Warehouse receipts	5
Insurance	5
Leasing	2
Pre- and post-shipment finance	1
Letters of credit	1

Source: Primary Data (2019)

Invoice financing was also offered by 7 out of the 8 commercial banks that participated in the study (Table 2). The commercial banks explained that there was less default risk involved in invoice financing because the farmers would be borrowing to meet incidental expenses against already realized income (from already sold agricultural produce as evidenced by the invoice), but awaiting payment. Onumah and Meijerink (2011) confirm that invoice financing is sought by borrowers to ease their short-term liquidity constraints or cashflow problems. According to the commercial banks, the proceeds due from the financed invoices, which would be paid through the lending bank, acted as security to the lender. Miller and Jones (2010), who call this type of financing "receivables financing", confirm that its security is provided by the payment of the sales proceeds directly to the lender. A study by Vitoria et al. (2012) confirmed the availability of invoice financing in Zimbabwe in NMB Bank, which targeted Model A2 commercial farmers, who practiced horticulture and livestock farming, as well as seed houses and processors.

Overdraft facilities were also offered by 7 out of the 8 commercial banks under study (Table 2). The banks revealed that they offered overdraft facilities to large corporates and loyal highly collateralized customers in the agricultural sector, mostly large-scale commercial farmers. In support of these findings, Masiyandima et al. (2011)'s study revealed that the Zimbabwean money market could only raise short-term loans like overdrafts for working capital and seasonal cropping in the agricultural sector. Vitoria et al. (2012) also confirms that overdraft facilities were offered by banks like NMB, Metbank, MBCA (now Nedbank) and Ecobank to the agricultural sector in Zimbabwe. However, the study revealed further that the financing facility was reserved for established agro-processing firms like Northern Tobacco, Natfoods and Delta Corporation among others; as well as longstanding customers, Model A2 tobacco farmers, and farmers in the horticulture sector. FACASI (2015) also confirms that 30-day overdraft facilities were reserved for executive clients who banked large amounts of money with banks like CABS and Agribank.

Term loans were offered by 6 out of the 8 commercial banks that participated in this study (Table 2). According to FACASI (2015), banks like CBZ, MBCA, Agribank, and ZB Bank offered term loans through their agribusiness units, targeting farmers with title deeds or lease agreements. This shows that smaller farmers were excluded from accessing the term loans. Warehouse receipts were also offered by 5 out of 8 commercial banks under study (Table 2). The popularity of warehouse receipts may be explained by the fact that they lessen risk to the lender because the farmer's stored/ warehoused produce (for example, maize and wheat) awaiting selling are taken over by the lender as collateral (Ruete, 2015).

The study also established that 5 out of the 8 commercial banks offered agricultural insurance to farmers in Zimbabwe (Table 2). According to the banks that offered agricultural insurance (both crop and livestock insurance), insurance was compulsory for all of its borrowers to ensure that in case of unforeseen circumstances, all financial investments in specific agricultural projects were recuperated. Insurance therefore safeguarded both the bank and the farmers' investments. However, due to the current hyperinflationary environment in Zimbabwe, concerns were raised by the banks over the costly insurance premiums borne by the farmers, and the ability of the recuperated financial investments from insurance to fully cover the advanced loans and other investments that would have been lost during the unforeseen disasters. The absence of agricultural insurance in some banks may be explained by the dominance of value chain financing in the banking sector, which in itself acts as an insurance mechanism that minimizes the banks' exposure to risks associated with lending directly to individual farmers (Ruete, 2015). This trend was observed in this study as the three banks (CB2; CB3 and CB7) that did not offer any agricultural insurance were actively involved in value chain financing with large corporates like Norton Leaf Tobacco, Tongaat Hullet, Tanganda, NatFoods, Delta

Beverages, Schweppes and Tianze Tobacco among other big contracting companies in Zimbabwe. These commercial banks stressed that they did not lend directly to individual farmers because of the risks involved.

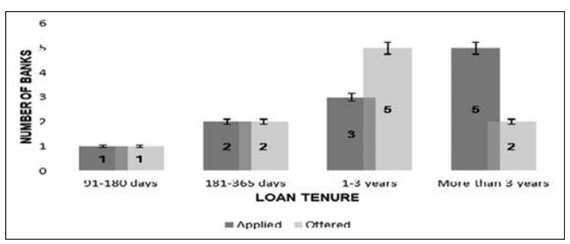
Leasing was offered to the agricultural sector by only 2 commercial banks in the study (Table 2). CB2 and CB4 highlighted that they offered lease financing for agricultural equipment to local farmers. Vitoria et al. (2012)'s study confirms these findings by avowing the collapse of lease financing in Zimbabwe due to the changes in the economy and the agricultural sector after the FTLRP. However, as revealed further by Vitoria et al. (2012), lease financing is re-emerging as some banks are now offering it in the Zimbabwean banking sector as shown by this study. Only one bank offered pre-and post-shipment finance (Table 2). According to CB2, Pre and Post Shipment finance was mostly offered to tobacco merchants and tea industries that contracted various individual farmers, who were also into exports. CB2 expounded that this agricultural financing tool was two- legged. Firstly, Pre-Shipment finance was offered for the growing and processing of export products like tea and tobacco locally. The Post-Shipment leg subsequently provided bridging finance to the contractors after they had exported their produce awaiting payment from their offshore customers. Hence, it is a variation of invoice financing that was reserved for cash crop farming companies that were into exporting.

CB6 is the only bank under study that offered Letters of Credit to its agricultural sector clients (Table 2). In this case, the bank guaranteed a supplier from which a farmer was accessing credit purchases that their payment would be received in full and on time. In case of default by the farmer, the bank acted as a guarantor by settling the remaining or entire amount in full. On the other hand, CB3 revealed that it offered another interesting and innovative asset financing tool for farmers termed "Contract Based Asset Finance". It differed from the traditional long-term Capital Expenditure (CAPEX) loans in that it was only reserved for farmers who had already secured contract farming arrangements with large contractors/ value chain actors.

Loan Tenures Sought from Banks vs Loan Tenures Offered to Farmers in Zimbabwe

Figure 5 shows the loan tenures that the commercial banks revealed were sought by most farmers in Zimbabwe, versus the tenures that they actually offered them.

Figure 5: Loan tenures sought by farmers vs loan tenures offered by commercial banks in Zimbabwe



Source: Primary Data (2019)

Only one bank (CB8) revealed that farmers applied for short-to-medium term loans of 91-180-days tenure, and fully met the demand for those loans as shown in Figure 5. Two banks (CB1 and CB3) also revealed that agricultural sector clients sought medium-term loans of 181-365-days tenure. The same banks also highlighted that they also offered these medium-term loans to their agricultural sector clients, thereby meeting their demand (Figure 5). Based on these findings, the study established that there was a match between the demand and supply of short to medium-term agricultural loans in the Zimbabwean banking system. However, Vitoria et al. (2012)'s study contradicts these results because it claimed that the 270-day term loans' availability is limited in the Zimbabwean banking sector.

The results presented in Figure 5 also show that medium to long-term loans of 1-3 years were sought in 3 of the 8 commercial banks under study, whilst a total of 5 out of the 8 commercial banks offered them to agricultural sector clients. Supply actually seemed to be outstripping the demand for these medium-term loans, which may point to lack of awareness among local farmers on the term loan packages being offered by local commercial banks. On the other hand, long-term loans of more than 3 years were sought from 5 of the 8 commercial banks under study, whilst only 2 banks offered them to the farmers as shown in Figure 5. According to CB1, long-term loans sought by the majority of the farmers were mostly asset finance and capital expenditure (CAPEX) loans. CB1 also revealed that the scarcity of CAPEX loans was caused by the lack of property rights among farmers in the agricultural sector in Zimbabwe to secure borrowing, confirming findings presented earlier in the study. The bank however expounded that such long-term loans could only be advanced to farmers if they were secured by off-farm collateral. The study therefore established that there was a mismatch between the demand and supply of long-term agricultural production loans in the Zimbabwean banking system as confirmed by various studies (Ministry of Agriculture, 2013; Vitoria et al. 2012)

Approval Status of the Majority of Agricultural Loan Applications by Farmers in Zimbabwe

Table 3 shows the loan approval status of the majority of the agricultural loan applications received by commercial banks that participated in this study. The commercial banks were asked if the agricultural loan applications that they received from farmers in Zimbabwe were mostly fully approved, partially approved or completely rejected, to which they respondent with yes/ no responses as shown below.

Table 3: Loan approval status of most agricultural production loan applications received by commercial banks in Zimbabwe

	n=8	
Loan Approval Status	Yes	No
Fully approved	7	1
Partially approved	1	7
Rejected	2	6

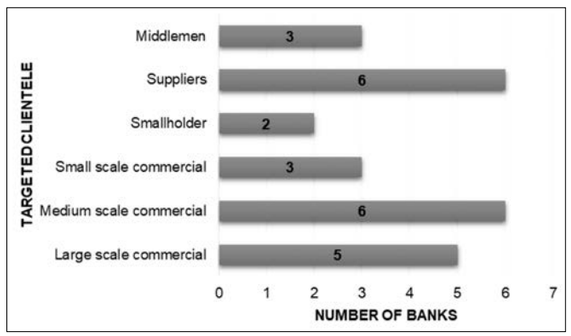
Source: Primary Data (2019)

The bulk of the agricultural sector loan applications were fully approved as confirmed by 7 out of the 8 commercial banks under study (Table 3). These results contradict Masiyandima et al. (2011), whose study revealed that the bulk of agricultural sector loan applications were rejected due to various reasons like lack of collateral, lack of own contribution, poor past performance and poor past loan record among others. According to CB1, "At the first stage of loan application, a farmer receives the list of requirements for eligibility. Farmers who fail to meet the requirements are already screened out at this initial stage." This explains why banks under study rejected a few loan applications as most of the farmers who reached the application submission stage would have met most of the loan requirements. On the other hand, CB4 expounded that, "Rejecting most loans would imply that the bank is targeting clients that are out of its risk appetite. Hence, its sourcing strategy is aligned to clients that are within its risk appetite, who are able to satisfy most of its lending requirements." CB6 also confirmed that the final stages of the loan application process were reached by applicants who would have already gone through a thorough screening process. However, in agreement with Masiyandima et al. (2011), CB6 indicated that most loan applications fell along the way on the grounds of lack of collateral. According to the bank, this explained why it mostly scores a 98% success rate for the agricultural loan applications it receives. Only 2 banks (CB2 and CB3) highlighted that the bulk of the agricultural loan applications they received from individual farmers were completely rejected because they preferred to lend through well-established and highly collateralized value chain actors to lessen its exposure to default risk.

Zimbabwean Commercial Banks' Target Clientele

Figure 6 shows the clientele targeted by the commercial banks that participated in this study.

Figure 6: Clientele targeted by commercial banks in Zimbabwe



Source: Primary Data (2019)

The commercial banks under study mostly served suppliers and medium scale commercial farmers, who were targeted by 6 out of the 8 commercial banks (Figure 6). Suppliers were engaged with the commercial banks through value chain financing arrangements previously discussed in this study. Large scale commercial farmers were also a popular clientele among the commercial banks, who were served by 4 out of the 8 commercial banks under study (Figure 6). Their popularity may be attributed to the fact that most of them are highly collateralized, a scenario that shields banks from exposure to risk in case of default. As mentioned elsewhere in this study, Vitoria et al. (2012) confirm that most long-term financing tools for the agricultural sector are reserved for highly collateralized large farmers and agribusinesses. On the other hand, middlemen were served by only 3 commercial banks that participated in the study (Figure 6). CB4 explained that the middlemen clientele it served organized out-grower schemes through which they bought agricultural produce from individual farmers, stored, and sold it to different markets. According to the bank, the middlemen acted as mediators between individual farmers and the final market.

Small scale commercial farmers were also served by 3 out of 8 commercial banks that participated in the study (Figure 6). However, the least popular clientele were the smallholder farmers, who were served by only 2 out of the 8 commercial banks. These findings are confirmed by FACASI (2015), which claims that the majority of small scale farmers in Zimbabwe are excluded from bank lending programs because they are not formally employed, and do not have documents like pay slips that are required to process loans. In addition, they are purported to lack financial records for their business operations and cannot prove the viability of their farming activities, thereby contributing to their inability to access bank loans as shown by this study (FACASI, 2015). Yaron (1992), in support, also underscores that where commercial lending institutions have been active in rural areas, they prefer to serve large scale farmers, and totally ignore smallholder farmers.

CONCLUSION

The study aimed to establish the status of agricultural financing by commercial banks in Zimbabwe. All commercial banks under study participated in agricultural financing. However, the magnitude of actual financial investments in agriculture varied across banks. Average agricultural loan portfolios were higher than the majority of the statistics reported after the year 2000 by the RBZ and other available studies. However, current agricultural loan books are still lower than the pre- land reform maximum achieved in 1999. Low investments in agriculture by local commercial banks were attributed to land tenure and weather risks, as well as lack of collateral among farmers. The hyper-inflationary environment in Zimbabwe also increased the farmers' costs of production, thereby affecting their ability to repay loans. Value chain financing, bank overdrafts, invoice finance, warehouse receipts and term loans were the most popular agricultural financing tools offered by commercial banks in the Zimbabwean banking sector. There seemed to be an excess supply of medium to long-term loans by the commercial banks, as few farmers sought them. However, the demand for longer-term loans for capital expenditure remained unmet. Most agricultural loan applications were fully approved by the

commercial banks under study. However, the lack of collateral hindered most farmers from completing the loan application process. The commercial banks' preferred clientele included suppliers, medium and large-scale commercial farmers. Small scale and smallholder farmers were excluded from financing programs by the majority of the commercial banks.

Therefore, policy should address the issues surrounding land tenure in Zimbabwe because land tenure risk is the key obstacle to agricultural financing by local commercial banks. Irrigation infrastructure development should also be prioritized to eliminate the dependence by farmers on the risky rain-fed agriculture, which repels financial investments by commercial banks. Commercial banks should strive to match their financing packages with the actual needs of the farmers on the ground, for example, by providing more long-term loans to the sector. Value chain actors should be monitored to ensure that they do not charge exorbitant rates to farmers to ensure the growth and perpetuity of their agricultural enterprises in the long-term. Moreover, educational campaigns to local farmers should be intensified to improve their awareness of alternative financing tools that they can access from the financial institutions. Farmers are also implored to invest in off-farm collateral in the absence of legal titles to their land in line with what the banks want to ensure their improved access to bank credit. They should also strive to invest in cheaper irrigation infrastructure like boreholes and drip irrigation kits to lessen their exposure to weather vagaries like drought. Investments in irrigation infrastructure will also ensure agricultural production all year round, and thus improve the farmers' performance and ability to access further financing.

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SCIENTIFIC PAPER

ANALYSIS OF THE CHAIN OF THE BANANA INDUSTRY OF ECUADOR AND THE EUROPEAN MARKET

[1]Eduardo Vaca, [2]Norma Gaibor, [3]Krisztian Kovács

[1]Department of Geography, University of Minho, Azurém Campus, 4800-058 Guimarães, Portugal
* Corresponding author
[2] CTAC, Department of Civil Engineering, University of Minho, 4800-058 Guimarães, Portugal;
[3] Department of Farm Management and Corporate Planning, Faculty of Economics and Business, University of Debrecen

[1]leninedu14@hotmail.com
[2]normygaibor@gmail.com
[3]kovacs.krisztian@econ.unideb.hu

Abstract: *Bananas are among the four main crops in the world, including wheat, rice, and corn. It is the most exported fresh fruit in the world in terms of volume and value. The European Union (EU) is the largest banana importer globally with an estimated volume share of 33%. Ecuador is the top exporter since it is responsible for one-quarter of the world banana exportation. It represents 22% of total world exports, 27% of total agricultural exports in the country and 8% of the value of all exports (including oil). The present work analyzed the chain of the banana industry of Ecuador and its position in the EU market. A non-experimental empirical method with a quantitative and qualitative approach was used supported by scholarly literature and secondary research data collection. Results obtained show that the main countries destination shipped 87.8 % of total bananas exported from Ecuador in the period of 2007 – 2017. The largest importer of Ecuadorian banana is the European Union (28.9%). In Ecuador, approximately 78% of the banana producers are small companies, by adding the medium ones 95.6% is reached. Thus, the production of bananas in the country is mainly based on the family economy. In 2019, the official banana box price for producers in Ecuador is USD 6.30. In the EU market, it can reach over USD 18.00. It suggested an unfair payment to small and medium producers.*

Keywords: *Ecuadorian banana, value chain, fairtrade*
(JEL Classification: *Q13, M16, M21*)

INTRODUCTION

Globally, in the agricultural sector bananas are positioned fourth within world production rankings after rice, wheat, and maize and the fourth most important food crop among the world's least-developed countries with production of over 105 million tons per year (FAO, 2018a). It represents around 115 million metric tons annual production according to National Geographic, 2017.Through trade and supply, bananas make up a global $8.9 billion trade industry (Dadrasnia et al., 2020). It is the most exported fresh fruit in the world in terms of volume and value. As a highly traded commodity, the banana is an integral part of the global value chain. It is also an important commercial crop in developing countries due to the income and employment to rural populations generated. It is the most consumed fruit in Europe and North America. Ecuador is the top exporter since it is responsible for one-quarter of the world banana exportation (Iriarte et al., 2014).

There are more than 1000 varieties of bananas produced and consumed in the world. The Cavendish banana type is the most commercialized. It represents around 47% of total production. Approximately 50 billion tons of this variety is produced globally every year. The Cavendish banana is the most supplied to the US and European markets. It is more appropriate to international trade than other varieties as they are more resilient to the effects of lengthy travel (Israeli et al., 2017). It is important to note that 85% of banana production is consumed locally. It is basically for the larger

producer countries such as India, China and Brazil, and in some African countries where bananas contribute significantly to diets of people. Meaning that only the rest,15%, is traded in the international market. In some of the most representative exporting countries, the banana production profit has an important weigh-in net agricultural production, as it is the cases of Ecuador where it is mainly for exportation (FAO, 2018b).

The banana exported from Ecuador is mainly ordered by very demanding markets in terms of quality, whose standards were achieved through the development of high technological levels of production, transportation, and distribution. The banana production chain in Ecuador involves internal and external members (Medina, 2013). It is the reason why an analysis of the chain of the banana industry is required to understand, the role of every stakeholder and the establishment of the principal implications for economic and social sustainability. It should include producers, exporters, importers, and trade policies.

The sector of Fresh Fruit and Vegetable (FFV) in the EU is one of the most important categories for European supermarkets. Bananas (10%) come third and are the main fresh fruit imported from outside Europe. However, consumer prices have stagnated or increased very slightly since 2001, where a banana price war between retailers has halved consumer prices. In contrast, wholesale prices have decreased by almost 25%, while retailers have increased their share of the banana value in most countries to between 36% and 43%. This decline in import prices has been transferred to all major countries supplying the EU, where the value left at the origin has fallen by 20% to 50% in real terms. This at a time of significant increases in both production and living costs. Inputs, such as fertilizers and pesticides, have risen by up to 130%, while the high costs of compliance with quality, sanitary and environmental standards for bananas entering the European market are incurred mainly by producers. For banana workers and farmers, themselves, food, health, education, and other living costs have rocketed in the period since 2001. On average, workers only earn between 5 % and 9 % of the total value of bananas while retailers manage to capture between 36 % and 43 % (BASIC, 2015).

The importance of the Ecuadorian banana trade justifies the analysis of the chain of the banana industry and its exportation to the European Union (EU) market. In this way, the aim of the present review was to provide an analysis of the Ecuadorian banana industry chain considering the key stages and stakeholders up to the final consumer. It includes the social aspect and Ecuador's current banana position in the European market. In this context, this study uses data from official consulting sources, in order to provide criteria for improving the supply chain sustainability of this tropical fruit.

BANANA INDUSTRY OF ECUADOR

In Ecuador, banana production began in 1940. At that time, it became an important axis of the Ecuadorian economy in a direct way, generating employment and income and indirectly boosting the growth of other productive activities. In Ecuador, 100% of banana production is generated by Ecuadorians and 70% of the marketing is done by national companies. In exports, the banana and oil share the first positions in the generation of currency for the country (Resabala, 2004). Currently, banana exportation contributes 2% of the total GDP and it represents 35% of the agricultural GDP of Ecuador. On the employment side, it, directly and indirectly, benefits 383,000 Ecuadorian families. If each family maintains an average of 5 members, the beneficiary population represents 12% of the total population of the country (MCE, 2017).

Approximately 5.5 million hectares of land are dedicated to banana production globally, according to the latest available data from 2015 (FAO, 2018b). Ecuador has nearly 12 million ha of land under agriculture, of which over 11 % is occupied by permanent crops, notably bananas, sugar cane, and oil palm. As stated by the Ministry of Agriculture and Livestock (MAG) of Ecuador, there are around of 165 000 hectares registered with the banana crops which represent the 10% of the total agricultural area in the country. Banana crops are sited in ten provinces, three of them are in the lowlands of the Pacific coast - El Oro, Guayas, and Los Ríos - where the production is more significant, see Table 1.

Table 1. Provinces in Ecuador with higher banana production in 2016

Province	Harvested area (Ha)	Production (MT)	Yield (MT/ Ha)	National %
Los Ríos	61,937	2,822,585	45.57	43.23
Guayas	48,805	2,139,384	43.84	32.76
El Oro	42,340	1,075,395	25.40	16.47
Other	27,254	492,312	18.06	7.54
Total	180,336	6,529,676	36.21	100

Source: (CFN, 2017)

Generally, agricultural value chains cover multiple actors associated with diverse functions and technologies. It can be explained when actors may be input suppliers, producers, wholesalers, retailers, and functions are the supply of raw materials, cultivation, harvesting, processing, and selling (Mishra et al., 2018). The banana production chain in this country involves internal and external members. The producer can sell directly to the exporter or to an intermediary. In turn, exporters are intermediaries between producers and large international traders (except for Corporación Noboa, which is one of the five largest international traders in the world and sells its product directly to the markets of the United States and Western Europe). The exporter and the intermediary are necessarily forced to sell their product to one of the large traders, which controls 90% of the world banana trade. The importer sells the product, either directly to the country of destination or to the wholesaler, who then sells it to the retailers. They are the final distributors to the

different points of sale, from where the final consumer obtains the product. It worth to mention that in Ecuador the banana activity has high (January to April) and low seasons (June to September) (Medina, 2013).

The Ecuadorian banana industry is particularly diverse in terms of farm size, the multiplicity of exporting firms and supporting industry. The banana plantation structure is based on small, medium, and large banana producers. According to the Ministry of Foreign Trade of Ecuador (MCE-Spanish acronyms), there are around 5000 fruit producers in the country (MCE, 2017). Approximately 78% of the banana producers are small companies, by adding the medium ones (> 30 ≤100 hectares) 95.6% is reached. Thereby, the production of bananas in the country is mainly based on the family economy and popular and solidarity economy. It makes this sector contributes to the job generation and rural poverty reduction.

It can also be noticed that the distribution of the range of the banana crop areas is concentrated at the extremes: Only 4.32% of the total registered producers control the 42.56% of the total registered area when it is higher than 100 hectares. While 77.80% of the registered producers control 21% of the total area when it is smaller than 30 hectares, Table 2. Additionally, according to data from the Under Secretary of Agriculture of Ecuador, in 2011 there were about 230,000 hectares of banana crops in the country, meaning that only around the 78% are registered in the corresponding authority (Medina, 2013).

Table 2. The range of hectares per producer in Ecuador

Range (Ha)	Banana Crops (%)	Producers (%)
0-30 (Small)	21.00	77.80
>30 ≤ ¬100 (me-	35.44	17.88
100 or more (large)	42.56	4.32
Total	100	100

The Association of Banana Exporters of Ecuador (A.E.B.E - Spanish acronym) is a non-profit institution that groups the Ecuadorian banana export sector. Its main aim is to promote the integral development of the members, with the collaboration of entities of the public or private sector. It groups 30 national exporting companies that represent 97.10% of the total fruit sent by Ecuador to the world (AEBE, 2018).

The cost of banana production per hectare varies, depending on the farm size and yield level; the technologies used, and levels of inputs. There are two significant categories in bananas production. The first one is the high share of labor in total cost. It represents around 40% to 50% of the total cost for the small, medium and large farms. These high percentage shows the strong influence of direct or indirect labor in this sector which strongly affects the familiar economy of the rural areas as well as the urban region of the involved provinces and the country.

The second largest cost category in the production of bananas are the fertilizers, agrochemicals and other inputs. It is 28% of the total cost production. This indicates the close dependence of banana management on large applications of fertilizers and pesticides to improve soil fertility and fight disease. For small scale farms (19%), the agro-chemicals expenditures are higher due to producers cannot use aerial spraying and need to do manual applications which are more expensive. On the other hand, fertilizer investment increase with farm size due to in large plantations the nutrients requirements and the average fruit harvest per ha is also higher (Ministry of Agriculture and Livestock database of Ecuador and FAO, 2016 report).

According to the Ecuadorian Association of Banana exporters (AEBE," 2018), in 2018 (January to November), around 320 million boxes of 18.14 kg each one has been exported. It is equivalent to approximately 5 million 800 thousand tons. The banana is shipped preferably from two ports in Ecuador, Puerto Guayaquil and Puerto Bolivar Table 3. The transportation in these ports has been as follows:

Table 3. Exports by the shipment port in Ecuador, 2018

Port name	No. Boxes	%
Puerto de Guayaquil	247.339.86	77,91
Puerto de Bolivar	70.120.874	22,09
Puerto de Manta	-	-
Total	317.460.735	100

Source: (AEBE, 2018)

ECUADORIAN BANANA IN THE EUROPEAN MARKET

Banana production and yield data in Ecuador are shown in Table 4. The average in the last ten years is 6860895 MT and 35.38 MT/Ha, respectively.

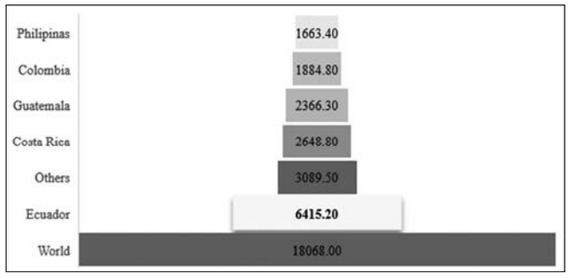
Table 4. Ecuador banana production and yield, 2007 - 20017

Year	Area Harvested (Ha)	Production (MT)	Yield (MT/Ha)
2007	197410	6002302	30.41
2008	215521	6701145	31.09
2009	216115	7637324	35.34
2010	215647	7931060	36.78
2011	191973	7427776	38.69
2012	210894	7012245	33.25
2013	188658	5995527	31.78
2014	182158	6756254	37.09
2015	185489	7194431	38.79
2016	180337	6529676	36.21
2017	158057	6282105	39.75

Source: (FAOSTAT, 2019)

Latin America (excluding Mexico) plus the Caribbean have been the world banana exporters predominant (80%) in the last 10 years. Europe, Australia, and Oceania are not listed as exporters since their production is for domestic consumption. According to the Food and Agriculture Organization of the United Nations in 2017, the five biggest exporting countries ranked are Ecuador, Costa Rica, Guatemala, Colombia, and the Philippines (Figure 1). The main exporter is Ecuador, which accounted for an annual average of one-third of the total global banana export volume between 2007 and 2017 (FAOSTAT, 2019).

Figure 1. The biggest banana exporters worldwide (thousand tons), 2007 – 2017

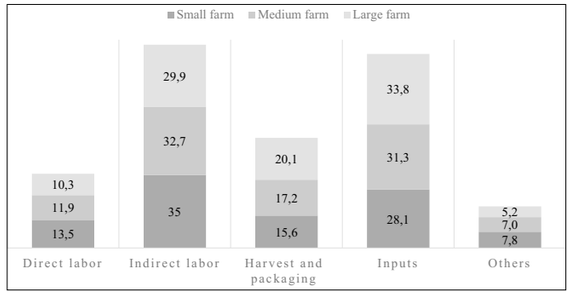


Source: FAOSTAT, 2019

Global import volumes of bananas reached around 18 million tons in 2018, 2% was increased compared to 2017. It was an estimated growth of 4% in the largest net importer, the European Union, and a 1% reduction in the United States (FAO, 2018a). In 2017, 17436.20 thousand tons of bananas were imported worldwide. European Commission Countries, North America, Asia, and Russian Federation were the largest importers. The main countries destination shipped 5477 thousand tons (87.8 %) of total bananas exported from Ecuador in the period of 2007 – 2017 (FAO, 2017). Ecuador exports bananas to an overall total of 71 different countries globally.

Cost production of banana has several categories to be taken into consideration, but two of them are the most representative. The first one is the high share of direct and indirect labor in total cost. They represent a cost of 48.5% for small farms (SM), 44.6% for medium farms (MM) and 40.2% for large farms (LF) (Figure 3). These high percentages demonstrate the significant influence job generation in this sector which directly influence the familiar economy of the rural and urban areas involved with the banana activity. The second more important cost category in bananas production is the inputs. This indicates the close dependence on extensive applications of fertilizers, agro-chemicals, and other products to improve soil fertility and fight disease. The inputs investment is higher as farm size increase (28.1% - SM; 31.3% - MF; 33.8% - LM) due to in large plantations the nutrients requirements and the average fruit harvest per ha is also higher.

Figure 2. Cost of production by banana farm sizes in Ecuador in %



Source: Calculated by the author (FAO, 2016)

In Ecuador, 2018 ended with an annual growth of 5% above the 330 million boxes. The Minister of Agriculture declared that by 2019, the price that the exporter pays to the producer for the 19.45kg banana box is USD 6.30. However, the average price internationally paid per box amounts to approximately USD 18/box (AEBE, 2018).

MATERIAL AND METHODS

The present work is under non-experimental empirical method with a quantitative and qualitative approach since statistical data from the period to be evaluated will be used.

The present project studies the current situation and analyzes the Banana Value Chain (BVC) in the EU import market. In order to develop the proposal aims, the theoretical approach of the BVC is employed. Knowing the involved actors and analyzing the different stages of banana production chain will allow understanding the dynamic and interrelations between them. This analytical approach of BVC includes hence the full range of activities that are required to bring a product from its conception to the supermarkets. Therefore, core concepts and data will be used in the chapters.

The inadequate control by the authorities about the fair payment to the producers makes the intermediaries and exporters take advantage and pay prices below the established limit by law. For this reason, the farmers have an unfair payment which affects their lifestyle. The present work also refers to the economic and social aspect and the contribution generated by the banana production sector in the country. Therefore, a problem tree and SWOT analysis (Fred R. et al., 2017) of the Ecuador banana sector is carried out to be discussed as part of the results.

The SWOT analysis in general terms is a tool to identify the current situation of an organization. It is an attempt to reveal the strengths, weaknesses (internal factors), and opportunities and threats (external factors) which can be applied to the object of study. It is to estimate the background of a situation and analyze the best actions to improve it. Strengths are characteristics that help to have an advantage over a person or company situation. Opportunities are aspects that are looking for advantage supported by strengths. The weaknesses are negative factors that must be reduced. The threats are external

factors that are obstacles to achieve our goals. The SWOT analysis is widely used for strategic planning of long-term and short-term development of an organization (Thamrin et al., 2017).

This study is supported by secondary research data collection, gather and examines numerous statistical data in combination with a valuation of empirical analytical approach and scholarly literature, trying to get the best analysis possible. Not enough specific information about the banana sector in Ecuador from scientific articles can be found. Thus, the source of information is mainly the following official consulting: Eurostat, European Commission, Food and Agriculture Organization of the United Nations (FAO), Banana Link, Ministry of Agriculture and Livestock (MAG) of Ecuador, Ecuadorian Association of Banana Exporters (AEBE), and literature review. For data processing, Microsoft Excel is used as a tool.

RESULTS AND DISCUSSION

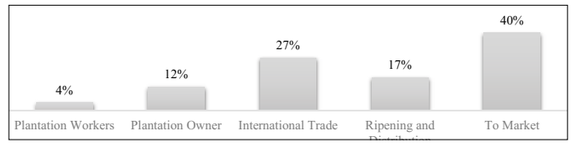
The largest banana producing countries are not necessarily the largest banana exporting countries in the world. Countries such as India (26.75%), China (10.03%), Indonesia (6.29%) and Philippines (5.30%) are among the top five world producers. However, it is mainly for domestic consumption due to the high contribution to the diet of their people. On the other hand, Ecuador (5.51%) is also ranked at the top five world banana producers (FAOSTAT, 2019). But, 95% of banana production in Ecuador is for global exportation. 5% is considered as waste or banana that does not meet the requirements to be sold in the international market. It is sold in the local market, for the human, animal, and industrial consumption and an important part is often wasted on the same farms (Acosta Povea et al., 2018).According to the latest available data (FAOSTAT, 2019), the five largest banana exporting countries categorized are Ecuador (36%), Costa Rica (15%), Guatemala (13%), Colombia (10%), and Philippines (9%). Showing that Ecuador is positioned as the top leader.

Ecuador banana sector

As it was stated by some authors (AGROCALIDAD, 2017; Iriarte, Almeida, & Villalobos, 2014; MCE, 2017), in terms of agriculture, Ecuador has a privileged position in the Earth. Due to the good agro-climatic conditions present in some regions of Ecuador make banana production accessible to the world the full year. The favorable climate and soil factors for growth, such as adequate light, deep soils with good structure and good internal drainage, which help in avoiding excessive use of agrochemicals, the country has an important advantage compared with other banana-producing countries.

The banana value chain (BVC) involves several stages and stakeholders. It starts from plantation workers and/or producers until the fruit is exhibited in the market ready for consumption. About the shared percentage in the value given to each participant through the BVC is shown in Figure 3. Over the time, the banana economy has been one of the key examples of unfair trading and power concentration in the hands of the biggest retailers in EU, 40% of the fruit value belongs to them. It has direct consequences on the lifestyle of thousands of workers and banana producers and workers who get the lowest income in the chain, 4%, and 12%, respectively. Recently, the growing market power of retailers and competition between large fruit companies has induced banana chains to be even more determined by supermarkets, especially in Europe.

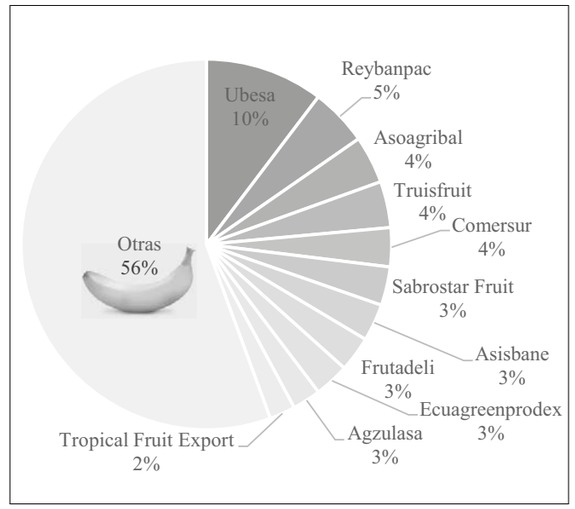
Figure 3. Share of the banana value chain by value in %, 2017



Source: Calculated by the author (National Geographic, 2017)

About the banana producers and exporters in Ecuador, Figure 5 shows, there is no monopoly, nor oligopoly in Ecuador, because the composition of percentage participation of banana exporting companies is represented by a significant number of companies (56%) and not by the five main ones.

Figure 4. Main Ecuadorian companies exporting bananas, 2018

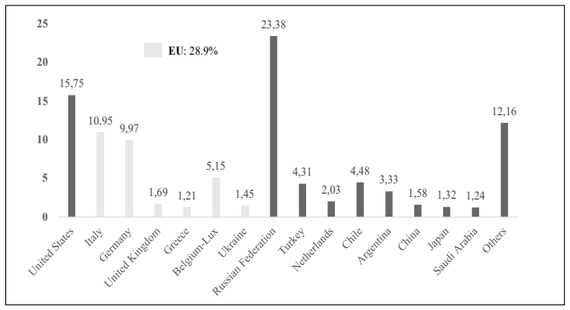


Source: Calculated by the author from AEBE, 2018

Ecuadorian Banana in the European market

The listed 15 countries (Figure 5) shipped 87.8 % of total bananas exported from Ecuador in the period of 2007 - 2017. The largest importer of Ecuadorian banana is the European Union (28.9%), followed by the Russian Federation (23.4%), and United States (15.8%).

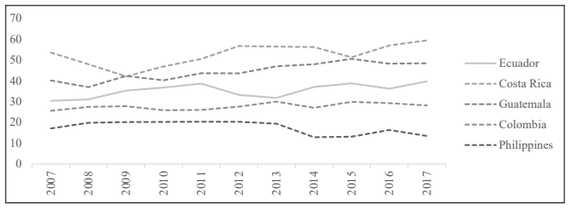
Figure 5. Ecuador banana exports main destinations (%), 2007 – 2017



Source: Calculated by the author from (FAOSTAT, 2019)

The national yield average is lower compared with Costa Rica (52.60 Tons/ha) and Guatemala (44.50 Tons/Ha) in the same period of time (FAOSTAT, 2019), Figure 6. This situation is mainly due to countries such as Costa Rica, Guatemala and others, 100% of the produced fruit is traded in its totality, through the signing of long-term contracts between producers and exporters. It allows stability and fair annual average price. They are also supported by policies that allow the exporter to supply, quality and prices abroad; as well as hiring shipping at convenient prices.

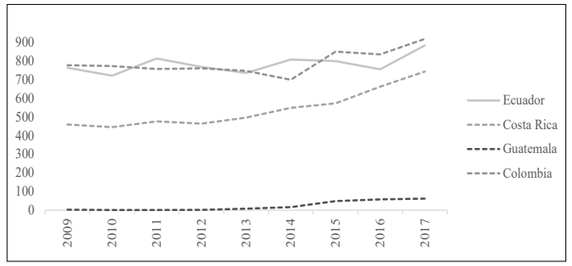
Figure 6. The banana yield of the biggest banana exporters (Tons/Ha), 2007 – 2017



Source: (FAOSTAT, 2019)

Ecuador, Costa Rica and Colombia continue to dominate the market, by contributing each with 20% of the total imports of the European Union. The tariff rates agreed under the Central American and Andean bilateral agreements were scheduled to be reduced. Shipments from Ecuador were decreased to 96EUR/ton in 2018 and 83EUR/ton from on 1 January 2019 onwards. It helped entries to the EU market at a reduced rate and as a result, Ecuador expected to account for a volume share of nearly 40% of global shipments in 2019 (FAO, 2018a). On the other hand, in 2018, Ecuador ended with an annual growth of 5%. Figure 7 shows that Costa Rica had the most important growth in the EU market in the last decade. It is registered import values of 459 and 743 million euros, in 2009 and 2017, respectively.

Figure 7. Banana import prices to the EU (Millions of Euros), 2009 – 2017



Source: Calculated by the author (European Commission, 2019)

SWOT analysis of the Ecuador banana sector

The banana industry is an important source of foreign exchange and a key point in the social balance in Ecuador. It is a source of employment for an approximate of 3 million people. Besides the economic and social importance, there are some other strengths that make Ecuador the outstanding world exporter of the fruit. However, several weaknesses and threats can be improved and corrected.

The banana industry is an important source of foreign exchange and a key point in the social balance in Ecuador. It is a source of employment for an approximate of 3 million people. Besides the economic and social importance, there are some other strengths that make Ecuador the outstanding world exporter of the fruit. However, several weaknesses and threats can be improved and corrected.

In addition to the mentioned in the SWOT analysis in Table 5. Some other strengths and weaknesses can be cited. By way of strengths:

- There are constant searching and opening of new markets for the positioning purpose.
- The Dale Foundation and Wong Foundation are non-profit organization supplement education and health in the rural sector supported by some banana producers (Medina, 2013).

About the weaknesses:

- The confrontation among producers, exporters, politicization of activity
- There are many small defenseless producers subjected to intermediaries.
- Child labor can still be found in a part of the banana plantations.
- Breach of social and environmental aspects

Table 5. SWOT analysis of the Ecuador banana sector

STRENGTHS	WEAKNESSES
Optimum Agri-climatic conditions Full year production capacity and extensive banana crop areas. Good roads quality for banana transportation until the main ports. High-quality control and accomplishment in accordance with international requirements. Availability of labor workforce for production and harvest.	Most of the producers are at a small level Lack of technology investment (irrigation systems), in the small/medium producers Overproduction of banana High inputs costs to be used in the production process Payment below the official price to producers, affect the income of these families working in this activity. A large number of intermediaries. Lack of greater international promotion of Ecuadorian banana
OPPORTUNITIES	**THREATS**
The trade agreement options with other countries. Growth in banana demand worldwide. Recognition for the quality of the Ecuadorian banana in the world. Strong organization by exporters. Greater logistics development in packaging and storage by exporters.	Climatic changes affect the production (flooding of crops by growing rivers next to plantations). Ecuadorian bananas are more expensive in comparison with competing countries. Strong competition from several countries regarding banana sales. Greater access to production technology by competing countries Ecuador has fewer trade agreements with the importer countries globally, in comparison with the other larger banana exporters. Better organization in groups of producers from competing for producing countries.

Source: Elaborated by the author, adapted from (AEBE, 2018)

Despite Ecuador is the current largest banana exporter, still there several threats and weaknesses to be considered and solved. The following are some proposed alternatives or solutions:

Stability. Through the signing of contracts between producers and exporters which helps the integration of the Ecuadorian banana industry.

Efficiency in productivity. Through giving added value to the product (organic banana crops), permanent training, greater investment, stronger research activity. All of it would lead to a decrease in costs production and increase competitiveness.

Promote the Certifications and aspects required by the markets: EurepGAP, Organic, Traceability, Food Safety, Quality Controls, Child Labor.

Improve labor, social and environmental aspects. More control related to a fair payment to producers at all levels.

Government support to access the main inputs: Microcredits and agreements with the inputs, suppliers, such as fertilizers, packing, and others.

Current problems of the banana sector in Ecuador

Current problems of the banana industry can be divided into two, internal and external factors. The following are considered as the main internal factors:

- Lack of a banana policy;
- Productive inefficiency;
- Official price not adjusted to the world reality, supply - demand; excess of plantations (over 200,000 hectares);
- Informality still exists in the sector, although to a lesser degree;
- Updating of the current Banana Law is required;
- High competitiveness (high costs of inputs, fuels, taxes);
- Lack of Legal Security;
- There is no direct credit financing.

As external factors can be mentioned the subsequent:

- Absence of strategy to promote a country brand;
- Lack of a long-term commercial agreement with the EU;
- Commercial benefits that our competitors have, such as Colombia, with the EU;
- Prices are managed or influenced by the biggest EU retailers;
- Social and environmental certifications required by the importer countries.

The unfair trade can be considered at the internal and external level. It is developed in a tree problem of the banana sector in Ecuador, Figure 20

CONCLUSIONS

The main objective of this study was to analyze the chain of the banana industry of Ecuador and the exportation to the EU market. After the analysis based on the data and figures which showed that global banana trade is dominated by South American countries, particularly Ecuador and the European Union is the biggest banana importer from this country. It is demonstrated a significant relationship between both parties and special importance for the banana industry in Ecuador.

There is an unequal concentration of resources which causes a significant difference in the social strata of the Ecuadorian coast families, it is especially in rural areas. Hence, the government should invest in technology and agricultural inputs aimed at small and medium producers, or so the supply of microcredits in order to have more opportunities for them to develop. Banana crops depend on the technology degree implemented. Between one and three direct workers are needed per hectare and from 1.5 to 10 indirect jobs per hectare.

Ecuador's main competitors in the world market are Costa Rica, Colombia, and Guatemala, which have several advantages, including higher productivity, stability in the

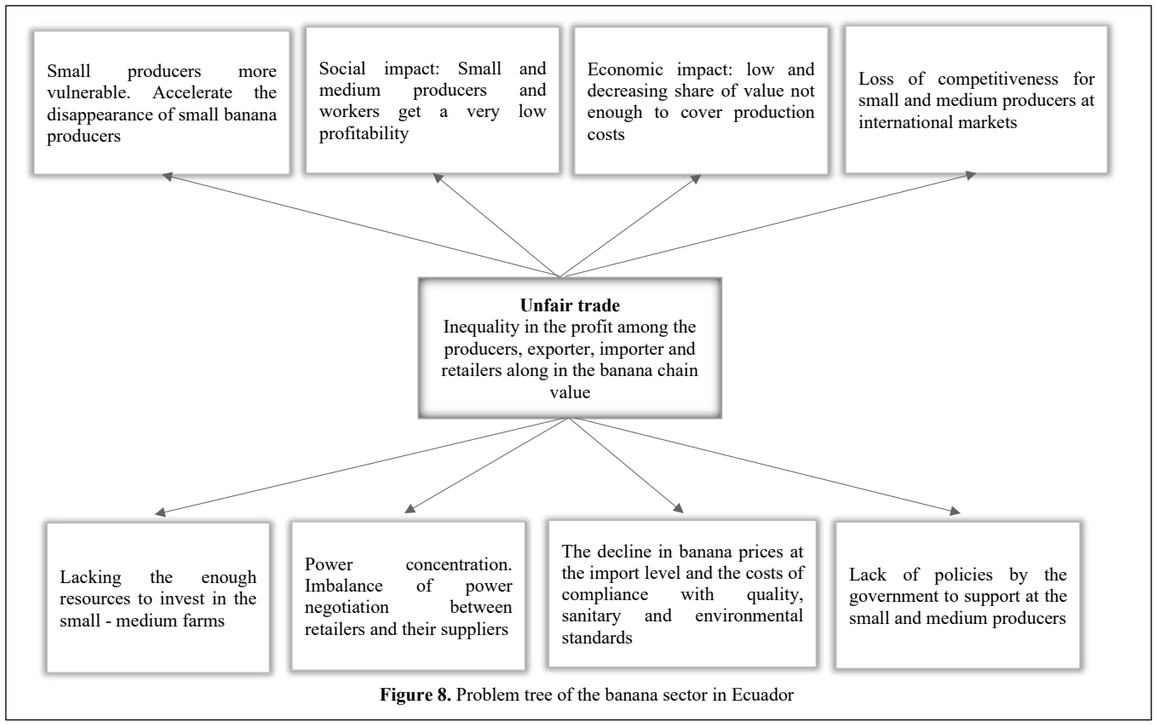


Figure 8. Problem tree of the banana sector in Ecuador

relationship between producers and exporters, long-term contracts and the appropriate political intervention in the sector. Ecuador must work hard to improve this problem by taking correct decisions and measures that make this country more competitive and efficient, in order to continue being the world's largest exporters of fruit.

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SCIENTIFIC PAPER

PROFITABILITY OF CASSAVA PRODUCTION IN THE ASHANTI REGION OF GHANA

[1]Paul Okyere [2]Jacqueline Baidoo

[1]Kumasi Institute of Tropical Agriculture
[2]University of Ghana; Department of Agriculture Economics and Agribusiness

[1]paulokyere28@gmail.com
[2]jacquelinebaidoo97@gmail.com

Abstract: Cassava is a crop that is massively produced and consumed in Ghana even though it is produced by subsistence farmers. The aim of this study is to analyse the cost and returns of cassava farmers. Farmers profitability was accessed using the gross margin, net present value and the benefit cost ratio. SWOT analysis was conducted to access challenges faced by cassava farmers. Data was collected by personal interview from fifty (50) cassava growing farmers in the Sekyere East District of the Ashanti Region, Ghana. The Costs and returns analysis show gross margin of USD 22.75 per acre. It was concluded that cassava is cultivated for both consumption and revenue. Even though there is low investment of capital in cassava production, it helps farmers to make use of available resources (personal savings, land and labour) which would have been idle. Further should compare profitability of crops that compete for use of famers land.

Keywords: *Economics Feasibility, Cassava farmers' profitability, Farmers SWOT analysis, Gross margin, Cassava production challenges*
(JEL Classification: *Q13, Q19*)

INTRODUCTION

The use of improved cassava seeds reduce poverty and increase consumption expenditure (Wossen et al., 2019). IITA/CEDP beneficiary farmers got twice the harvest of non-beneficiary farmers with the use of improved seeds (HarvestPlus, 2010). The use of improved inputs for agriculture production in the developing countries however is low. This leads to low productivity which results in low income of farmers. Adebayo et al. (2010) claim that farmers input in cassava production is low. Coupled with this is high perishability of cassava (Kwasi & Kobina, 2014). The economic cost of cassava loss is $300ha-1 (Danilola et al., 2019).

Farmers in Africa produce cassava to enhance food security. This might imply that farmers benefit from cassava production. It is confusing whether cassava production is for revenue (Turyagyenda et al., 2012) or for food security (Odoemenem & Otanwa, 2011; HarvestPlus, 2010). Cassava benefit in terms of revenue and consumption is not known.

Since cassava production is on a subsistence level, investment in cassava production is crucial. The cost of input used and output realized would determine whether to invest more in cassava production or not. The question here is it is profitable for farmers to produce cassava in Ghana? The following research questions were raised. What is the profitability of cassava production? What are the opportunities and challenges in cassava production in Ghana? The study hypothesizes that cassava production is profitable. The work is relevant to academia due to limited studies on profitability of cassava. The paper is structured into three sections. The first section outlines the introduction. The second section explains the methodology used to address the research objective. The last section provides result and discussion.

MATERIALS AND METHODS

The study was conducted in two communities, namely, Asokore and Apemso in the Sekyere East District because it is the most dominant cassava producing district in Ghana. A total of 50 respondents were randomly selected from cassava farmer producers with the help of the Department of

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Agriculture in the Sekyere East District. Data was collected or obtain through primary data. Primary data was collected through interviews using structured questionnaire.

Primary data collected focused on characteristics of cassava farmers, inputs used, cassava output and their prices. Transportation, labour and pesticide are measured as kilometers, per activity on farm and kg respectively

Gross margin was used to estimate the costs and returns of cassava production in the study area. Gross margin enables the estimation of the total costs as well as total revenue accrued to the enterprise within a specific production period. The difference between revenue (returns) and Total Variable Cost (TVC) makes up the Gross Margin (GM). It evaluates the gross profitability of a given enterprise. It is useful where the value of the fixed cost is negligible as it is in the case with cassava production (Nandi et al., 2011). which is operated mostly at small scale level. Therefore, Gross Margin is given as: GM = TR – TVC (Odoemenem & Otanwa, 2011; Nandi et al., 2011) Where, - GM = Gross Margin - TR = Total Revenue - TVC = Total Variable Cost.

Discounting method which includes the net present value (NPV) and the benefit cost ratio (BCR) (Donkor et al., 2017) are used for analysis of profitability of the cassava industry. The net present value shows the cash inflows less the cash outflow within the project period. The benefit cost ratio shows the ratio of cash inflow to the cash outflow.

Assumption: Production is projected over a period of 4 years. The is because land for cassava is mostly left to fallow after four years.

Interest rate is 12%. This is because most project usually uses a discount rate between 8 and 12 (Langat et al., 2015; Mensah, 2001)

RESULT AND DISCUSSION

From the 50 farmers interviewed about four fifth (78%) had a household size of at least 4 (Table 1). This emphasis why one third of cassava output is consumed by the household as shown in Figure 1.

Table 1: Characteristics of farmers and their farms

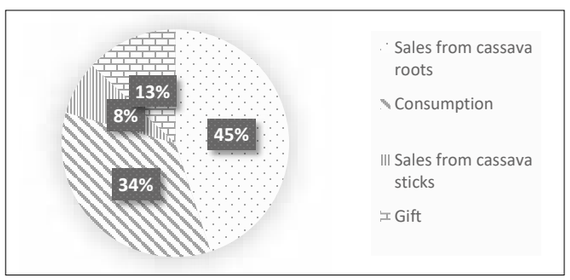
Variable	Frequencies	Percentage (%)
Household		
1-3	11	22
4-6	18	36
7-9	15	30
More than 9	6	12
Land size		
Less than 1 acre	3	6
1-5 acres	17	34
5 acres above	30	60
Level of education		
None	23	46
Primary	9	18
JSS	4	8
Senior high	2	4
Tertiary	2	4
Farming experience		
1-5	7	14
6-10	9	18
11-15	11	22
16-20	11	22
More than 20	12	24
Use of labour hired		
Yes	40	80
No	10	20
Land arrangement		
Inheritance	42	84
sharecropping	5	10
Renting	3	6
Food crop production (in acres)		
Land under cassava	16	32
Land under maize	9	18
Land under plantain	11	22
Land under cocoyam	9	18
Land under yam	5	10

More than half of farmers (60%) have at least five acres of land which is about two hectares (Table 1). This land is usually inherited. Land is used for a combination of crops of which cassava takes about one third of land use. This means that majority of farmers land is used for cassava cultivation explaining the importance of cassava to farmers. About half of farmers (46%) have no formal education but more than four fifth of farmers (86%) have more than five year of farming experience (Table 1). This might explain why farmers skills depend on low input for farming. About 80% of farmers hire labour on their farms (Table 1).

Use of cassava tubers

An acre of land yield about 6000kg of cassava. The two major use of cassava is for sale (45%) and consumption (34%) (Table 1).

Figure 1: Percentage of use of cassava



Cassava serves as a food security crop as almost half of cassava (47%) is used for consumption and gift. From Figure 1, about half (45%) of cassava is sold for revenue.

This implies that increase in production of cassava would increase revenue gotten. More than a third (34%) of cassava is consumed by farmers. Cassava serves as a food security as more than a third (34%) of cassava production is consumed. This finding is in conformity to the findings of Gaffney et al. (2012) that cassava is a famine resilient crop. This is also in agreement with the findings that cassava is a dominant staple crop (Masamha et al. 2017).

3.2 Profitability of cassava Production

The cost structure of cassava production is viewed in terms of activities indicating how much the farmer spends. In analysing the cost structure of cassava production in terms of activities, four major activities were identified namely; transportation, labour and pesticide. Labour cost includes money paid to labour to perform activities such as planting, weeding and harvesting of cassava roots. Expenditure on tools (hoes, cutlasses, baskets and sacks) was as low at USD 50.05, representing 13.0% of total cost (Table 2).

Table 2: Gross margin of cassava production

	USD	Percentage
Total Variable cost per acre of land		
Transportation	86.45	22.6
Labour (both hired and family labour)	200.2	52.3
Pesticide	45.5	11.9
tools cost	50.05	13.0
Total Variable Cost	382.2	100
Revenue per acre		
Sales from cassava roots	345.8	85.4
Sales from cassava sticks	59.15	14.6
Total revenue	404.95	100
Gross margin	USD404.95 – USD22.75	USD382.2 =

Labour cost shared the highest amount (35.7%) among total cost (Table 2). Labour is usually used for the performance of agronomic practices and harvesting cassava (Masamha et al. 2017). Labour cost is followed by transportation cost accounting for about (22.6%) of the total production cost (Table 2). Inadequate investment in technologies is dominant in cassava production which if rectified might lead to a double increase in productivity.

The Costs and returns analysis show gross margin of USD 22.75 per acre (Table 2). This means that a farmer get 22.75 Ghana cedis at the end of the year. After four years when the land is allowed to fallow, a farmer gets USD 77.40 (Table 3)

Table 3: Financial analysis of cassava production

	Year	Cash outflow	Cash inflow	12% Discount factor	Dis-counted Cash inflow	Dis-counted Cash outflow
1	2019	382.2	404.95	1.00	404.95	382.20
2	2020	382.2	404.95	0.89	361.62	341.30
3	2021	382.2	404.95	0.80	322.75	304.61
4	2022	382.2	404.95	0.71	288.32	272.13
	Total				1377.64	1300.24
					BCR	1.06
					NPV	77.40

A USD 1 invested into the cassava industry gives USD 1.06 at the end of four years.

SWOT analysis of cassava farmers

The SWOT is viewed according to their strength, weakness, and opportunity and threats. The results in Table 4 are ranked according to their importance. Considering the SWOT, the results show that a farmer exemplifies many prospects, and has his strength and weaknesses. Their main strength is their personal savings and high market penetration (Table 4). With regard to resources, cassava farmers have available land and labour.

Table 4: SWOT Analysis of the Respondents

STRENGTHS	WEAKNESS
Have personal savings to invest	Low cash flows
High market penetration	Low investment in resources
Land is freely given through inheritance	Low bargaining power of farmers
Availability of labour	Lack of accounting and other soft skills due to low level of education
OPPORTUNITIES	**THREATS**
High demand	Government less concern
Cassava is regarded as a hunger security crop because of the 1983 hunger	

Farmers weakness of low accounting and soft skills and low bargaining power (Table 4) can be traced to their

low level of formal education (Table 1). Farmers can use their high market penetration to increase their bargaining power by forming co-operatives. Cassava farmers had many opportunities as regard to their cassava production. The 1983 hunger in Ghana has revealed the importance of cassava as a resistant crop in Ghana. Ghanaians have thus developed a taste for cassava and its products. Cassava is periodically demanded by consumers. This has increased the involvement of donors in supporting cassava production. This conforms with findings that donors play a critical role in supporting the cassava value chain (Poku et al.2018).

Cassava farmers had threat of less concern of government in cassava production (Table 4). Formation of co-operatives by farmers would increase their visibility to government.

CONCLUSION

From this research, it can be concluded that cassava is cultivated for both consumption and revenue. Even though there is low investment of capital in cassava production, it helps farmers to make use of available resources (personal savings, land and labour) which would have been idle. Further studies should compare profitability of crops that compete for use of famers land.

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SCIENTIFIC PAPER

PROFITABILITY OF CASSAVA PRODUCTION IN THE ASHANTI REGION OF GHANA

S H P Malkanthi

Faculty of Agricultural Sciences,
Sabaragamuwa University of Sri Lanka

malkanthi@agri.sab.ac.lk; malkanthi09@gmail.com

Abstract: Organic food marketing has currently become one of the most developing markets around the world, including Sri Lanka. Thus, the main aim of this study was to recognize the determinants of the purchase intention for local organic food among urban Sri Lankans. A consumer survey was conducted covering capital cities of six urban districts in Sri Lanka; Colombo, Galle, Gampaha, Kandy, Kurunegala, and Rathnapura using a sample of 600 consumers, from December 2016 to May 2018. Out of the 600 consumers, only 114 were purchasing organic food by that time, and those 114 consumers were chosen as the sample for this study. Descriptive statistics, principal component analysis, and multiple linear regressions were used as data analysis techniques. According to the results, majority of the respondents belongs to the 31-45 year age category. While most respondents had an education up to GCE Advanced Level, significant percentages of respondents were educated up to graduate and post-graduate levels. Also, most of the respondents received a monthly total income in between Sri Lankan Rupees 85,001 and 162,000 (approximately US dollars 473 – 900). Although one-fourth of the consumers are purchasing organic food at that time, a higher number is willing to buy them in future. As per the principal component analysis, health and environment consciousness, certification of organic food, marketing aspects of organic food, common parameters of organic food, awareness on the value of organic food, and market availability of organic food were the extracted determinants. The results of multiple linear regressions revealed that market availability, common parameters of organic food, and health and environment consciousness are the dominating variables of the purchase intention of organic food consumers. Thus, expanding the market conditions for organic food, establishing a better marketing system, conducting effective food awareness programs, and value addition for organic food are the identified timely essential recommendations.

Keywords: *Determinants, organic food, consumers, purchase intention, Urban Sri Lankans*

INTRODUCTION

Organic food consumption is currently becoming a popular practice in many countries. Moving from conventional food to organically produced food consumption is one of the major trends in the present society. Throughout the world, and in Sri Lanka, organic food is becoming popular over conventional food. Organic food can be defined as the products that are in the process of production without adding any artificial fertilizers, pesticides, and additives (Mohamad et al., 2014).

At present, lifestyle of the consumer has materialized, especially regarding the attitude of consuming organic food, because people are becoming more aware of the benefit of consuming healthy food in their day-to-day lives. Even though a naturally grown clean, and balanced diets are vital for healthy life, many regular meals are mostly made by using unsafe additives, flavors, preservatives, and various coloring in the market (Shaharudin et al., 2010). The health aspect has become one of the critical matters of consumers at present when purchasing products, especially regarding food items. This factor is the main motivating force for consumers to buy organic food at the market (Yin et al., 2010).

Many countries around the world have recorded a gradual increase in the usage of organic food. Due to less harmfulness of organic food to humans, and also due to its health and environmental benefits, buyers tend to purchase organic food than conventional food items (Hapuarachchi, 2016). Developing countries like India and China have markets on the global level due to a high demand for their organic products (Sujaya et al., 2018) According to Tech Sci Research (2014), Indian organic food market is anticipated growing over 25% during 2016-2021. As per the world organic marketing statistics, the return for organic products in 2016 in US was EUR 38.9 billion sales, while it was EUR 9.7 billion sales in Germany and EUR 6.7 billion sales in France. Although organic farming is being practiced in 178 countries, the largest

single market is the US (47%) next being the European Union (EUR 30.7 billion, 37%) followed by China (EUR 5.9 billion, 6%) (Sujaya et al., 2018).

In focusing attention on customers' purchase intention, it is a complex process based on the perceptions, behavior, and attitudes of consumers. Purchase intention can be defined as an individual`s readiness and like to purchase a particular product or service (Al-Ekam et al., 2012). Purchase intention may be changed under the fluctuations of price or perceived quality and value of the organic food. Also, consumers are influenced by internal or external motivation factors during the purchasing process (Gogoi, 2013).

Badgley et al., (2007) reveal that organic farming has a higher possibility to contribute to global food production. Davis et al., (1995) revealed that purchase intentions are affected by environmental and health consciousness, safety and quality concerns, and important product characteristics such as nutritional value, freshness, taste, and price level. According to Mintel (2000), as the young and old aged groups of people least concern with organic food, they have lower emphasis on their diet and health. Organic consumers think that production of most of the conventional food products is environmentally harmful as it involves high use of chemicals and pesticides, while organic food production is perceived as being environmentally friendly (Wilkins and Hillers 1994). Many studies revealed that concern on environment has a favorable in□uence on the consumer purchase intention (Zanoli and Naspetti 2002; Magnusson et al., 2003).

Study of Rosario (2006) revealed that Sri Lankan customers do not like to pay a higher cost for organically grown vegetables. Most investigations have concluded that price is the primary determinant factor for the purchasing intention, and the cost of organic food has been cited in many articles to be the major obstacle for not purchasing organic food (Hughner et al., 2007). In modern days, individuals have become highly health conscious and environmental concerned (Gould, 1988; Dunlap and Jones, 2002).

Main reasons behind these trends are the ever-increasing disease burden and ecological degradation. When considering dietary practices, food habits are responsible for various health problems such as non-communicable diseases, food poisoning, and food allergies. It has been proved that organically manufactured food products do not contain harmful pesticides, additives, and preservatives that can cause health problems (Centre for Organic food and Farming, 2015).

Krystallis and Chryssohoidis (2005) stated that, factors like food quality and security, reliance in certification and also in some case the brand name, heavily influence in determining a purchase than price and socio-economic variables. As per Chryssochoidis (2000) and Padel and Foster (2005), consumer knowledge determines the purchasing intention of organic food. Stobbelaar et al., (2006) claimed that, if consumers are more knowledgeable about organic food, their purchasing intention is mainly positive. Knowledge of consumers about organic food could be increased from various sources. Gracia and Magistris (2007) proved that, information on organic food displayed at the market could have a high influence on consumers' knowledge. Pandey et al., (2019) revealed that understanding consumer is crucial for sellers for the gradual growth of the organic food market.

Sri Lanka has full of natural resources than other countries. It has a high potential to fulfill this ever-growing market demand in the society for organic products. Countries across the world, including Sri Lanka, have recorded a comparative increase in use of organic food (FiBL and IFOAM, 2013). Many researchers reported that people who are health conscious and environmental concerned tend to have a positive attitude on organically processed food. This booming industry has created a necessity to study the intention of consumers' on organic food in Sri Lanka as agricultural producers, where it provides valuable insights to drive the organic food market effectively. Consumers' purchasing intention towards organic product has an impact on consumer behavior towards organic foods

Sri Lankans are experiencing health issues and environmental problems when they deviate from traditional food habits and conventional agricultural methods. World Health Organisation (2015) highlighted that non-communicable diseases and unhealthy foods had caused 38 million deaths around the world. Sri Lankan government is turning towards organic farming, and motivating farmers to practice organic farming. However, the value of organic food is perceived differently by consumers, and hence, it is time to find out about the consumer purchasing intention towards organic products. Therefore, this study aimed to reveal the determinants of purchase intention of local organic food, based on urban consumers in Sri Lanka. Thus, the main question of this study was "what the factors determine the purchase intention of urban Sri Lankan consumers' towards local organic foods are"?

OBJECTIVES OF THE RESEARCH

The primary aim of the research was to study the determinants of consumer purchasing intention towards local organic food in urban Sri Lanka. Evaluation of the socio-economic characteristics of the consumers of organic food, the present situation of purchasing organic food and willingness to purchase of organic food in future, identification of the determinants of purchase intention of organic foods, and analysis of the relationship between extracted determinants and purchase intention of organic food were the specific objectives of the study. Using the conceptual framework (Figure 1), six hypotheses were formed as follows:

Hypothesis used in the study

$H_0$1; There is no relationship between Health and environmental consciousness and the purchase intention of organic food.

$H_0$2; There is no relationship between Product certification of organic food and the purchase intention of organic food.

$H_0$3; There is no relationship between Marketing of organic food and the purchase intention of organic food.

$H_0$4; There is no relationship between Common parameters

of organic food and the purchase intention of organic food.

$H_0$5; There is no relationship between Awareness about the value of organic food and the purchase intention of organic food.

$H_0$6; There is no relationship between the Market availability of the product and the purchase intention of organic food.

Conceptual Framework of the study

A conceptual framework provides the structure of the research concept and relationships between the variables. After a thorough literature review, essential determinates were identified (Figure1), and hypotheses were developed to test them in Sri Lankan context.

Figure 1. Conceptual framework of the research

METHODOLOGY

This study was carried out in the capital cities of six districts (Colombo, Galle, Gampaha, Kandy, Kurunegala, and Rathnapura) in Sri Lanka. Capital cities of those districts were selected purposively for the research as they have the potential for the presence of organic markets and organic food consumers. Four organic food markets were randomly selected from each city. The target group was chosen from customers who came out of the market. Questionnaires were filled with the customers who were willing to answer the questions. Data were collected at 24 organic food markets (04 supermarkets from each city), and the sample size was 600 customers (100 from each city). A consumer survey was conducted using the pre-tested questionnaire in the selected six cities, from December 2016 to May 2018. Several data collection techniques were adopted, including questionnaire surveys, focus group discussions, and informal interviews. The questionnaire was developed by considering the past research work and the present situation. Out of the 600 consumers, only 114 were purchasing organic food by that time. Those 114 consumers were considered as the sample for this study. In data analysis, frequencies and percentages were used to assess the consumers' socio- economic characteristics, present situation of purchasing organic food, and willingness to purchase organic food in future. Determinants influencing the purchase intention of consumers have been analyzed with principal component extraction with varimax rotation. Reliability Coefficients (Cronbach's Alpha) were used to measure the reliability of the determinant factors, and a multiple linear regression model helped to analyze the relationship between extracted determinants and purchase intention of organic foods.

RESULTS AND DISCUSSION

The results of the study are arranged in four sections as socio-economic factors of the organic consumers in urban areas, present situation of purchasing organic food and willingness to purchase organic food in future, determinants of purchasing organic foods by urban consumers, and the relationship between extracted determinants and purchasing intention of organic foods in Sri Lanka based on the selected six capital cities.

Socio-economic factors of organic consumers in urban areas.

Socio-economic factors of the sample are important in multiple ways. Therefore, main socio-economic factors such as age, gender, education level, and monthly income of the respondents were reviewed in detail. Results are presented in Table 1.

Table 1. Socio-economic factors of the respondents (n=144)

Socio-economic factor		Frequency	Percentage %
Age (years)	16-30	21	14.6
	31-45	102	70.8
	46-60	16	11.1
	more than 60	05	03.5
Gender	Male	37	25.7
	Female	107	74.3
Marital status	Married	125	86.5
	Unmarried	09	06.4
	Other	10	07.1
Family size	2-3 members	56	38.7
	4-5 members	77	53.6
	>5 members	11	07.7
Are there children in the family?	Yes	93	64.8
	No	51	35.2
Educational level	A/L	68	47.2
	Graduate	55	38.2
	Postgraduate	21	14.6
Monthly income (LKR)	40,001-58,000	49	34.0
	85,001-162,000	64	44.4
	>162,000	31	21.5

Source: Consumer survey 2016-2018

As per Table 1, most of the consumers (70.8%) belonged to the age category of 31- 45 years. The majority (74.3 %) of 144 respondents was females. It is evident that most consumers (86.5%) were married, had 4-5 family members (53.6%), and were with children (64.8%). According to the results, families with children tend to buy organic food more than others.

Consumers who purchased organic food, had higher educational levels. While the majority of the consumers (47.2%) had studied up to GCE A/L, there were significant number of graduates and postgraduate consumers as well. It seems that, consumers with a good educational background, concern more about organic foods than the others. The highest percentage of urban consumers (44.4%) had received a monthly income between 85,001 – 162,000 LKR, which is a comparatively higher level of income compare with the average monthly income of a normal family in the country.

The present situation of purchasing organic food and willingness to purchase organic food

The present situation of purchasing organic food and willingness to purchase organic food in the future were studied, and the findings are presented in Table 2.

Table 2: The present situation of purchasing organic food, and the willingness to purchase organic food

Present situation of buying (n=600)	Frequency	Percentage
Yes	144	24.0
No	377	62.8
No response	79	13.2
Present frequency of buying (n=144)		
Most of the time	23	16.0
Sometimes	39	27.0
Rarely	82	57.0
WTP in future (n=600)		
Yes	314	52.4
No	224	37.3
No response	62	10.3

Source: Consumer survey 2016-2018

As per Table 2, only a substantial number of consumers (24%) have bought organic food. Even among them, only a very few number (16%) has bought them frequently, while the rest were occasional buyers. Nevertheless, among the respondents, a higher percentage (52.4%) was willing to pay a premium price for organic food in future, if products are truly organic. According to Coulibaly et al., (2011), consumers in West Africa, Ghana, and Benin have agreed to pay a higher price for organic vegetables. Consumers' willing to pay for premium price for organic products differ across diverse product categories (Gil et al., 2000: Krystallis and Chryssohoidis, 2005).

Determinants of purchase intention of organic foods by the urban consumers

A study on the significant determinants of the purchase intention of organic foods by urban consumers was carried out in this stage. Firstly, the Kaiser-Mayer-Olkin (KMO) and Bartlett's Test was carried out to check the suitability of the data for the principal component analysis. Table 3 presents the findings of the KMO and Bartlett's Test.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.803
Bartlett's Test of Sphericity	Approx. Chi-Square	1886.493
	Df	351
	Sig.	0.000

According to Table 3, the KMO value of sampling adequacy is 0.803, which exceeds the suggested cut-off value of 0.60 (Tabachnick and Fidell, 2007). The Bartlett's test of sphericity was significant (Chi-square value 1886.493, p 0.000), indicating that the inter-item correlations were sufficiently large for principal component analysis (PCA). A PCA followed the KMO and Bartlett's test, and Table 4 presents the result.

Table 4. Results of the principal component analysis (PCA)

Factor	Mean	SD	Factor loading
1. Health and environment consciousness The idea which is "No Harmful effects" become the reason for purchasing intention. The idea which is "Good for Health" become the reason for purchasing intention The idea which is "No pesticides in organic foods become the reason of purchasing intention Organic agriculture gains benefit for the environment	4.23	0.875	0 .805
	4.58	0.621	0.787
	4.19	0.887	0.701
	4.53	0.678	0.636
2. Product certification of organic food Label influences the purchasing intention of organic food. Brand Name influences the purchasing intention of organic food. Consumers trust the labels of organic food. Labels mean high-quality food.	3.44	1.069	0.826
	3.31	1.119	0.782
	3.16	1.075	0.733
	3.10	1.047	0.722

3. Marketing aspects of organic food Packaging of organic food influences the purchasing intention. Labeling of organic food influences the purchasing intention. Government rules and regulations on the safeness of organic food influence purchasing intention. Certification of organic food affects purchasing intention.	2.99	1.014	0.867
	3.06	1.029	0.787
	3.30	1.104	0.720
	3.60	1.066	0.665
4. Common attributes of organic food Taste of organic food affects the purchasing intention. The good smell of organic food affects the purchasing intention. Quality of organic food affects the purchasing intention.	4.32	0.754	0. 834
	4.10	0.906	0.829
	4.50	0.748	0.599
5. Awareness about the values of organic food Information on Nutritional value of organic food affects the purchasing intention. Knowledge about organic food affects the purchasing intention.	4.35	0.683	0.834
	4.30	0.6150	0.762
6. Market availability of the product Availability of organic food in the market influences the purchasing intention.	3.74	0.939	0.757

The result of PCA in Table 4 evidenced that six (06) factors were extracted as those components are good for the purchase intention of the organic foods, from the consumers' responses to the 27 statements as variables for principal component analysis, (with Kaiser Normalization and varimax rotation). Those items were extracted with factor loadings value below 0.5, and the contribution of each item made to the corresponding factor was achieved by applying the reliability coefficient Cronbach's alpha for further clarification.

Factor 1 (Health and environment consciousness) was based on the ideas of "no harmful effects – absence of any chemical food additives, protect soil microbial population, enhance soil conservation and increase natural soil fertility level" "good for health," and "no pesticides" as the reasons for purchasing organic food. The study of Kapuge (2016) and Wijesinghe et al., (2016) explained that the awareness and health consciousness are the key determinants of purchasing organic foods, and they have a positive impact on the purchase intention. However, they reported that, "environment consciousness" does not have a significant impact on individuals' purchasing attitude of organic food. But, the findings of this study revealed that, environmental consciousness is also an important determinant of purchase intention. Meanwhile, based on a research, Sivathanu (2015) has reported a similar finding. Both findings indicated that, consumers prefer to purchase organic products due to the involvement of environment-friendly processes.

Factor 2 (Product certifications of organic food) was derived from four measures, including labels influences the purchase intention of organic foods, brand name influences the purchase intention of organic foods, consumers trust the labels of organic food, and labels mean high-quality food. The importance of certification and organic labeling was also considered as a strong determinant in the study of Narmilan and Amuthenie (2015). This study revealed that product certification and organic labeling are better solutions to overcome failures to recognize the quality of organic products.

Factor 3 (Marketing of organic food) was derived from the packaging and labeling of organic foods, government rules and regulations on the safeness of organic foods related to certification of organic foods which influence the consumers' purchase intention.

Factor 4 (Common parameters of organic food) was derived from the factors including taste, good smell, and quality of organic food, which influence the consumers' purchase intention.

According to Ozguven (2012), health, price, quality, and food safety are the four factors that motivate consumers to purchase organic food. Findings of Narmilan and Amuthenie (2015) indicated that the role of quality, price, health, and the safety of foods are more important for the purchasing behavior of organic foods. Among those variables, health and price are the most dominant determinants. However, according to Sivathanu (2015), health, safe, and nutritious factors are the leading determinants of the purchase intention of organic foods.

Factor 5 (Awareness on the value of organic products) comprised of two measures as the information on nutritional value of organic food affecting the purchase intention, and the knowledge on organic foods, which affect the purchase intention.

Although the determinants of organic food purchase intention are changed (dynamic), health consciousness is found to be a better predictor of organic food purchase intention, and the consumers' awareness regarding organic food is a determinant that helps to moderate a positive impact of purchase intention (Asif et al., 2018).

Factor 6 (market availability of the product) was also comprised of one measurement, i.e., the presence of organic food in the market causes the purchasing intention.

The relationship between extracted determinants and purchasing intention of organic food

The relationship between extracted determinants and purchasing intention of organic food was analyzed using multiple linear regression analysis. According to the six hypotheses, the resultant factor scores were then regressed against the dependent variable (mean of purchasing intention). Table 5 presents the relevant results.

Table 5. The results of multiple linear regression analysis

	Beta coefficient	T	Sig.	Hypothesis H0
Health and environment consciousness	0.167	2.069	0.040	Reject *
Product certification of organic foods	-0.035	-0.429	0.669	Do Not Reject
Marketing aspects of organic foods	-0.056	-0.691	0.491	Do Not Reject
Common attributes of organic foods	0.174	2.157	0.033	Reject *
Awareness about the value of organic foods	-0.003	-0.033	0.974	Do Not Reject
Market availability of the product	0.202	2.504	0.013	Reject *
Adjusted R2 = 0.067				
Standard error = 0.6376, based on 95% confidence level				

Table 5 provides the multiple linear regression model summary and over-fit statistics. The results have shown supportive evidence to prove that the determinants of purchasing intention. The multiple linear regression analysis indicated positive relationships between purchase intention and market availability of the products, common parameters of the organic products, health, and environmental consciousness. This finding is in line with Aertsens et al., (2005), who reported that environmental concern has a significant effect on the use of organic food. However, Kapuge (2016) reported that environmental concern is not a determining factor affecting the purchase intention of organic food in Sri Lanka.

Thus, the multiple linear regression analysis revealed that the market availability of the product (Beta coefficient 0.202), common parameters of organic food (taste, smell, and quality) (Beta coefficient 0.174), and purchase intention of organic products (Beta coefficient 0.167) due to higher Beta coefficient value rather than the other factors respectively. And also, both the common parameters of organic food and market availability of organic food were indicated significant relationship to the purchase intention of organic foods.

Determinants of purchasing intention of organic foods are imperative for the marketers, companies and farmers, because these findings have implications in future to fulfill the real consumer requirements.

Conclusion and Recommendations

As per the socio-economic factors, more than half of the consumers of the sample were female, and the majority of them were in between 31- 45 years of age. Also, most of them had an education up to the GCE Advance Level and received a monthly income of Sri Lankan Rupees 85,001 – 162,000 (Approximately US dollars 473 – 900).

Less number of consumers are purchasing organic food at present, and out of them, only a very few buy organic food often. However, more customers are willing to buy them in the future if the products are genuinely organic.

As per the principal component analysis, mainly six factors influence the purchase intention of consumers towards organic food. They are health and environmental consciousness, product certification of organic foods, marketing aspects of organic food, common parameters of organic food, awareness about the value of organic food, and market availability of the products.

Results of the multiple linear regression analysis indicated a positive relationship between purchase intention and the three determinants (the market availability of the product, common parameters of organic food, and health and environmental consciousness). The key determinant of purchasing organic food was the market availability of the product.

Development of the marketing mix (4Ps) can gain a certain level of uplifement in the organic market in Sri Lanka. According to consumer analysis, there is a significant positive implication for the development of the market. Hence, the marketer/seller need to pay more attention on 4Ps (Product, Price, Place, Promotion) related to organic food.

Improving the marketing system is a great strength for organic agriculture. Almost all stakeholders have to participate in the development of an efficient marketing system. Furthermore, expanding the market conditions for easy access for farmers to sell their products, an innovation of more organic products with quality research, and value-addition for organic foods are the driving forces to establish an improved marketing system.

The research discovered that consumers tend to purchase organic foods due to their quality parameter like smell, taste, and quality, which means the products do not include inorganic chemicals. In the present context, price is the most prominent barrier to increase the consumption of organic food. Marketers have to pay attention in this regard to offer their products at reasonable price levels.

Promotion is also an essential aspect of marketing, because a favorable image is created by promoting in the form of advertisements. Marketing aspects, including branding, labeling, and product certification are significant factors that affect the purchasing behavior of consumers. Even within this rapid dynamic society, consumers have concerned more about the health aspects of organic food. This could be achieved by conducting effective product promotion and awareness programs in road tours, trade shows, exhibitions, campaigns, and advertising regularly to introduce organic food products. Policymakers need to draw special attention to retain the

present consumers and create new consumers as well.

Lack of presence of organic products at the market is an issue faced by consumers who are willing to buy organic food. However, if organic products are available in the market with easy access, consumers tend to buy organic food than other foods.

A suitable government certification system for organic food products is required to drive the organic food market efficiently. The current trend of consumer purchasing intention is directed towards their concern about the environmental impact of the production process of particular products.

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SCIENTIFIC PAPER

ANALYZING THE ORGANIZATIONAL QUESTIONS OF THE ELITE YOUTH ACADEMIES BY THE CASE STUDY OF FOOTBALL ACADEMY OF DEBRECEN

Zoltán Szalánczi

University of Debrecen, Faculty of Economics and Business, Institute of Sports Management
4032, Debrecen, Böszörményi street 138

szalanczi.zoltan@econ.unideb.hu

Abstract: Thanks to the effect of the resources flown in to the youth football, the previous, and more simpler structural scheme of the clubs went under a transformation. I will analyse the operation of the youth sport enterprises as economic companies, and the organizational scheme with the most important managerial questions faced in the firm. This will be based on the case study of the Football Academy of Debrecen. In the first part of my publication, I will investigate the evolution and the importance of the sport enterprises, with the relevant scientific literature. In the second part I will discuss the structural scheme of the Football Academy of Debrecen with the analysis of the separate departments. I will search for the differences between the youth sport enterprises and the organisations who are operating as a professional football club.

Keywords: *non-profit company, sports enterprise, structural scheme, youth development*
(JEL Classification: *Z2*)

INTRODUCTION

Thanks to the great potential and fast development of the sport sector, professionally operated clubs started to appear in the last quarter of the XX. century. These clubs worked like an economical company with profit- and benefit-oriented functions in the frame of the national championships. In the evolution of the professional sport three factors were determinate (DOWNWARD et al. 2009):

a. Development in the organizational part of championships and competitions

b. Presence of paying spectators and the development of the available infrastructure and sport consumption attitude

c. Creation of properly formalized championships

The sport-science and the economy grew separately for a long time, but next to the nature-science side, the social aspects of the sport gained ground increasingly. The evolution of the business part in the sport was the base of the fact, that there is no such thing as modern sport-science without economic theories. A lot of consumer and producer decisions became analyzable with the methods given by the economy, because the discipline handling the conditions, alternatives, and results of these decisions investigate the consumption and production of these bare resources. It became clear, that the attendants of the sport market meet these decisions on a daily basis. It is an important part of the economy to follow up these procedures, where the exchange transactions happen between people and organizations. These procedures are the input of the analysis. In economical manner, market is the mechanism, where the concrete and potential participators of the sector find and change their products or services between each other. The central elements of the process are the supply, demand, price, and income (ÁCS, 2015).

The aim of this research is to analyze the organizational structure of an elite football academy and also to show the similarities and differences between the youth sport enterprises and profit-oriented professional futball organisations.

The business aspect of the sport is a largely nation and sport-specific phenomenon. It is in close relation with the internal attributes of the concrete sport (rules, organization, media-capability, etc.) and in other hand there is an impact from the nations economical system, development level and cultural traditions (ANDRÁS, 2003).

A research from Ibrahim (2009) confirmed, that the advancement in the economy and the successfulness in the sport do not come together. We cannot say, that the nation

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who has a more advanced economical system has better results in the sport events than other undeveloped countries. This research highlighted that we have to separate successes achieved in the financial and in the sport-technical aspects, and in the future, we have to deal with the economic efficiency separated from the results „on the pitch".

The presence and amplification of the business in the sport can be realized in the next general steps. The starting point can be found in the popularity of the sport, which is determined by the amount and potential growth of the number of spectators. This basis amplifies the interests of the companies who want to raise their media and marketing activities. These factors are the ones, whose start the change in the sports traditional organizational structure, which comes with new stakeholders on the markets of the sport sector. These new participants can be leagues, agencies, event-organizing companies, who generate new cash flows. Thanks to the development, tools shown up for the coordination of the market (ANDRÁS, 2003):

a. business coordination, business technics
b. specialization: agents, mediators
c. new products: royalties, transfers
d. sport organizations transforming into business organizations

Nowadays, the sport sector is one of the biggest form of entertainment. The market had an impact on the mostly media-capable sports. The consumer became determinate with the penetration of the business into the sports. We can talk about business in the sport, when specialized companies satisfy the consumer demands connected to the sporting or watching sport events. The base of this is the suitable organizational structure and the change in the management from the sport-oriented leadership to the company-oriented type. The increase of the solvent demand on the market just amplified these effects. The interesting and media-capable sports, followed by lot of people gained the interest of the company sphere, who wanted to raise their marketing activities, with the fact, that they can be a cheap and alternative advertising space. Thanks to these effects, a lot of money flowed in to the sport-market. This trend changed the traditional income-structure of the sport clubs, and also had an impact on their interior values. With the influence of the commercialization, the sport companies had to adapt to the changed environment of the market. In a couple of sports, the formerly elitist, amateur aspect was changed to the business guided aspect. The closed, socially isolated approach became open, and the game changed into business. Even so, this process is still running, the battle between different values still alive. The showing of the business in the sports can be analyzed in different aspects. An important step was the technological development, because sudden expansion of the communication and informatics made possible to settle with the geographical borders. Due to this, the sport events far from each other became potential rivals on the domestic market. The inflow of the great amount of capital also induce changes in the rules of the game. The interest towards the sports, and the income linked to this were growing together with the investments and working costs of the companies. The components of these are the arisen (sportsman) salaries, the growing entertainment supply, and the highly expansive technological and sport-science apparatus. It is more and more in the interest of the sport-companies to "keep" their popular players, as bare resources on the pitch. The business aspect mostly extended out in the "spectacle" sports. The leisure sports realized a change like all the other companies in the business world.

Probably the reason for this big difference between leisure and spectacle sports, and also thanks to the media these sports are important parts of the entertainment sector. Inside the media, the development of the television coverage was the biggest indicator of the commercialization of the sports. The presence of the television was the key to gain the interest of the consumers. The media is the biggest bearer of the business possibilities in the sports, so we have to understand it through the interests of it. It is ascertainable, that many people's free time is pledged to the television, and it made, and helped to spread the "passive sport".

Only a few sports became a "spectacle sport" (ÁCS, 2015). On occasion of the traditional sports, it is an important aspect for us to see, what are the characteristics to call them media capable.

Five attributes were defined (ÁCS, 2015) to help us decide these sports:

a. appropriate arrangement in space and time
b. understandable and simple rules
c. spectacular
d. high spectator interest
e. it can be broadcasted without special skill and equipment

The media also made a new product in the sports. Intangible assets started to appear connected to the sport-events. From these assets the most significant is the broadcasting rights. According to Gálik and Urbán (2009) a new dimension came inside to the traditional classification of sports. We have to differentiate "made for television" sports also, what are only watchable for us through the television.

According to the definition, the company is the frame of the business enterprise. The company appears as a legal personality, like an organization, and we have to decide if it a business enterprise or not. It can be decided simply, sith it takes a form of any business organization, we can talk about a business enterprise. The business economics made a multiphasic and coherent criteria system, which can be the base of the decision (CHIKÁN, 2003):

a. the organization is independently achieving their goals
b. it works profit-oriented
c. it operates risk fully
d. it operates on an actual market

In this aspect, the business organization is a human activity, which has the basic goal to realize profit with the satisfying of the consumer demands (CHIKÁN, 2003). If we want to phrase this definition in the case of sport companies, the sport company is an enterprise, who wants to satisfy the consumer demands realized in the limits of sports with the

attainment of profit.

To know, if these conditions exist, it is recommended to inspect these factors more closely on the grounds of sports. About the risky operation, according to Bayer (2006), such high risk shows up only in the entertainment industry, because the fluctuant individual performances what go along with insecurity. Towards this, in theory, the high risk comes with high profit, and it can be suitable for the specific preferences of the investors, like the goal of achieving publicity.

It is important to examine the company in the aspect of long term profitability, but it is not necessary to handle this attribute in priority, because the sport satisfies a demand in each case, what is regarded the most determinate benefit, thanks to the commitment.

The next step in the analysis of the sport companies can be the case of independency. It is important to know if the company can deliberate their environment in their own aspects, and can it make the decisions based on it, because on this special market other participants can affect the conditions. It is important to examine the question of the actual market. We can realize a well operating price-mechanism in the input and output also. The nonprofit organizational background formed in the 19-20. decade in the sports. Usually they were social organizations, and this was the first step in the forming of the national sport associations. These associations worked like a labour organization for the sport clubs, and later on, their cooperation was the base in the forming of the international associations (ÁCS, 2015). According to András (2002), the sport companies are enterprises, what give the frame of the business organizations. They are usually formed as a business company. We can analyze these companies in narrow or in wide range. If we choose the narrow range, those companies belong here, who only have the contact with the final consumer. If we investigate in a wider range, those companies belong to the group, who are much farther in the supply chain. Thanks to these specialties, they can realize profit form five separate, but closely related markets.

Specialty of the companies in the sport sector can also be the contradiction of the goal-oriented operation. In one hand, the goal is the successfulness in the sport, but in the other hand, the profitability of the business operations can also be the main aspect. It is the objective of the management to find the balance between these goals (ÁCS, 2015).

To secure this balance, Chikán (2003) noticed a so called double value proposition, where the owner and the client creates values in the same process.

The sport companies who operate business oriented have these main markets (ANDRÁS, 2003):

a. consumer market
b. broadcasting rights market
c. sponsors market
d. merchandising market
e. players market

As a matter of the composition of the market, the consumers market is the local attendants and the consumers connected in other kind of mediums. Of course, these are not only the attendants, we have to note also the media and the companies with marketing goals.

The market for the broadcasting rights give already the biggest and most important part of the intangible assets, with the meaning, to give broadcast from a sport event, what are available only with the entrance fee (ANDRÁS, 2002). The value of this right is affected by the media-capability of the sport. The owners of the rights of the sport events are on the seller's side, who are mostly the organizers of the championships or tournaments, and the customers are the television companies, who buy these intangible assets in packages from them.

On the sponsors market firstly sport equipment companies started to appear, and in the 1970's this progress started to became more significant. According to Kassay (2010), the sponsoring is a two-sided business connection with rights and responsibilities bounded for economic successes. This kind of cooperation can boost the marketing activities of the company, and also the selling of the sport goods. Nowadays this relationship became one of the most important income resource for a company on the sports market.

The merchandising appeared on the grounds of the sport in the 1980's, with the point to increase the income of the sport companies with the selling of products decorated with the colors or logos of the clubs. The merchandising has a great effect on the selling of the club's products with the influence on the consumer decisions. It can affect these decisions with local marketing tools, guaranties, and others mediums. In our days we can enlist the merchandising as a tool for promotion and motivation (DÉNES, 1998).

The players market is a special labor market with a specific intangible asset, where the right of the player is defined, and it can be granted for a limited time between organizations. It is an intangible asset bounded to a person (sportsman), and it is overly including his capabilities allied with the sport (ANDRÁS, 2003).

The fast adaptation to the changes is an organic part of a company's strategy in the competitive industry. This is a typical tendency also in the professional sports as part of the entertainment sector, where services are provided. If we use the STEP (Social, Technology, Economic, Political) analysis to present it, it can be seen, in the economic aspect, the global economy, like the frame of the sport business and sport business operations (CHIKÁN, 2003), the economic recession (crises, national/regional pressures), and the changing systems are the main challenges for a company (ANDRÁS, 2011). The professional sport and the correlation of the business globalization is not a new concept. According to the interpretation of globalization in the business sector, in the professional sports, the decisions of the managers weigh the possibilities occurring worldwide. These decisions stay between the borders of Europe, but the expenditure of this frontier can come in a short time (CHIKÁN, 2003). It can be seen from these approaches, the managers are in the center of the globalization processes. They are making decisions according to the local, but also for the global trends like input or output processes. The markets of the professional sports (ANDRÁS, 2004) are also global, but only in different amount. The professional sport and their media-capable versions, the so-called spectator

sports became the part of the entertainment sector, so they were also affected in 2008 by the economic recession (ANDRÁS, 2011). According to the IEG Sponsorship Report, the classical marketing activities like advertisement and public relations had a downfall, but the sport sponsoring is growing after a small recoil (ÁCS, 2015).

In the last period of time, the role of the human resource has a significantly increased value in the economic and also in the social processes. Nowadays the people became the most significant resource in the aspect of successfulness and economic efficiency in a company. The fast-changing environment in the consumer and provider society, and other factors resulted an increase in the role of the human resources against other natural and economic resources (SZABÓ and BERDE 2007)

The modern managers see their employees as the most valuable assets in the organization. It has a key role in the success of a company to effectively invest and develop their intellectual capital. According to national and international researches, it can be seen, that the human resources and their management are crucial part of raising a company's competitiveness and performance in the business sector. The human capital has a significantly bigger value, then a group of people working for the organization. It has his own added value, what the employees bring for the organizational success of the company (DAJNOKI, 2015).

The human capital is a value based on the skills, knowledge and working-, and life experiences of the organizational members. It is also the collective value of motivation. Sometimes it is called as intellectual- and knowledge capital, emphasizing the importance of the human thinking, knowledge, creativity, decision-making, in the operation of the companies (KAROLINY and POÓR 2010).

If we would like to understand the role what the selection of the right human resources weighs in the sports, I would like to bring up this quote: "The human resources have more to do with the sports than we think. The scientific recruitment process finding the talents and reinforcements in the sport sector can be compared to the business sector – had his remark foremost" in the Present and future of HR in the sports conference Antal Gubicza, who had successes as head of organizations in karate, wrestling, and skiing" (PARASZT, 2008). Nowadays we have to handle the value of human resources seriously as the sport became an important business. It is a part of our everyday entertainment since the spectacle-sports can be found in the television or other mediums. In this sector, with this high business potential, the human resources really have a special value, because of fact, great sport performances are made by "ordinary" people. The person, who can make an outstanding performance is a bare resource on the market of sport companies.

It is also an important specification for a company operating in the sport sector, is the contradiction between the economic and sports success. In one hand the goal is to achieve success in the sport events, but in other hand the profitability is an important aspect also.

It is the objective of the management to serve the owners expectations and find the balance between these two goals (ÁCS, 2015). The need for sport and also economic successes reflect back in the organizational scheme of these companies (BÁCSNÉ, 2015/B, 2015/C, 2016). Companies operating the teams in the first division of the Hungarian Football Championship are corporations in one-third, and the two-third of them are limited-liability companies. In the Ltd. form, the most important part is the general assembly. The company is driven by the managing director, who is given the employing rights. The major, prescribed parts of the corporations are: general assembly, directorate, supervisory board, and the auditor. Beyond these, in the two organizational structure there are marketing, PR/Communications, logistics and technical departments also. In the Ltd. structure, the sport-technical department works separately, and a financial director helps the managing director. In the corporation, these tasks are driven by the club-director. The organizational parts are built in a functional way, so the division of labor is base of the creation of a department (BÁCSNÉ, 2017).

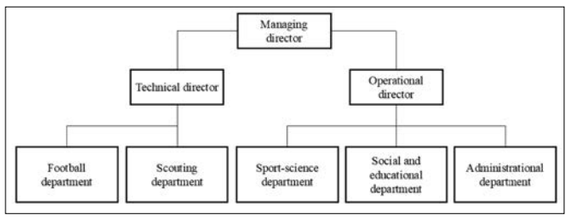
MATERIALS AND METHODS

The data was collected for the research by an interview with the technical director and the managing director of the Football Academy of Debrecen. The interview was made personally at the training center of the club, and the questions were based on the strategical and organizational aspect of the elite academy controlled by them.

RESULTS AND DISCUSSION

The nonprofit character has not only had an effect for the framework of the resources, but also on the organizational structure. Typically, the sport-technical questions are in the center out of the youth development objectives, with the support of the multidiscipline training program. It can be seen from the organizational structure, the Football Academy of Debrecen is separated for five departments, and they significantly differ from the structure of a profit-oriented company. The biggest difference is the absence of a separate legal, marketing, and financial department (1).

Figure (1): The organizational structure of the Football Academy of Debrecen



Source: Own illustration

In the leading of the company, three persons have a key role. The role of the managing director is to probate the interest of the owners, and the legal representation of the company. The clear demand from the DVSC Football Corporation as owner,

is the flow of home grown players in to the first team, and to build a base for the youth players. The influence of DVSC on the Academy is unquestionable. The success of a youth sport-oriented company is not measurable by financial indicators. It is related to the number of homegrown players integrated in the first team. The employees under the managing director are the technical and operational directors. These two persons coordinate the five departments directly. It is a characteristic of the linear organizations, that the functional and technical connections overlap, and the regulations of the objectives and authorities are clear (MUSINSZKI, 2012). In this context it can be seen, the control of each department is in the hand of a director with relevant technical knowledge. The sport-technical questions, like the development of players, scouting, coordination and evaluation of the coaches are the responsibilities of the technical director. Securing the conditions for the "work on the pitch", and controlling the organizational parts are the main tasks for the operational director.

The complexity of the work in the football department is given by the need to synchronize the development strategy of the different age groups. The teaching of the club's football philosophy starts in the youngest age groups, and they have to receive a complex, up-to-date development structure to be able to reach achievements in the future. The success of the academy is mostly depending on the performance of this department. A different kind of development is needed instead of the in a profit-oriented sport company. The work in the other departments are assigned under this section. The prime objective for the scouting department is to find and integrate the talented players in to the development system, with the usage of the defined player profiles. The controlling rights of the technical director is the important base of this department.

As the matter of the departments controlled by the operational director, they are also working to make the players development program easier to organize. The social and educational department is aiming to make the school and dormitory integration smoother, and to help the players with out of sport activities. It is important to have time for the studies next to the trainings and matches, to give them a chance for a career, if they don't succeed in the sport. The sport-science department is also in the authority of the operational director because the performance-diagnostics, mental, medical, and also the rehabilitation activities help the adequate development of the players, while the administrational and logistics department handles the actions connected to the competitions, contracts and player licenses. The financial management is also integrated in this section, because the financial administration is largely coming from accounting the received subsidies thanks to the nonprofit character.

In the organizational structure of the analyzed football academy – even in the structure of the income – the nonprofit elements dominate, but as the owner's objectives, the integration of the players to the first team direct the interest to the role of the business goals. These goals are the possibilities to develop quality players with serious market value.

In the last period, the Football Academy of Debrecen fell over a serious organizational transformation. The expansion in the sport-technical possibilities was necessary. For now, all the youth teams have two trainers, what is the base of quality work on the pitch, and there was a raise in the number of the specialists. The academy appointed employees like sport-psychologist, dietitian, performance and rehabilitation coaches, but this was not the biggest change in the life of the organization. In 2012, the managing director was the same person, who was responsible for the technical director position, but these tasks in each job needed a whole man. Thanks to the money invested in the youth sport, the budget of the company grown, and the legal background of the accounting was in need of a qualified financial staff. The daily operational work had to be separated from the development "on the pitch". To suit this, they had to completely reorganize the academy. They needed to separate the responsibilities and form departments with short-, medium-, and long-term objectives. To separate the control of the development strategy and the daily operation of the academy, the company had to appoint an operational director. His main objective was to take the tasks off from the shoulders of the technical-director, what are beyond his competences. The second big step in the academy's life was to terminate the "double-functions" in the staff, so everyone can focus on their objectives written in their job description and contract. Formerly the coaches, but also almost all the other employees had more than one functions in the company, mostly because of the financial possibilities. Besides the separation of the activities, the number of the employees almost doubled, sith an organization with this much budget, and number of players, needs more people for one task, for example the financial or coaching staff. The last change in 2018 was also in the management because of the improvement of the connection with the owners. With this modification, the technical-director only have to focus on the development strategy, and the questions about the work on the pitch. The managing director responsibilities are now belonging to a person who is a qualified and experienced business expert. This change in the management structure helps the organization to clarify the responsibilities and to remove the double functions.

With the development of sports, the economical conduct of the companies became common. The for-profit enterprises are part of the sport thanks to the high amount of money flown in to the sector, but we can find a notable difference between the organizational structure of nonprofit company like a youth academy. The major markets don't appear, or they alter because of the nonprofit nature, and this transformation have an effect on the structure also.

If we analyze the structure of the Football Academy of Debrecen, we can see the differences compared to the for-profit companies. The departments primarily create the conditions for the development program, while the legal, economic and marketing departments are missing, or they are integrated in another section. In total despite of these differences in the income, and in the organizational structure there are elements, what are guided by the owner's economic interest, so they are financially grounded.

The analyzed company's cooperation with the first team of DVSC is unique in the nation, thanks to the high number of players integrated to the professional level. This can be a good example for other clubs and not only on the development strategy level, but also on the aspect of the structure of these organizations.

CONCLUSION

It is clear from my research, that the development of the sport sector didn't only had an effect on the value of the players and clubs, but with this raise in the amount of the resources, the need for development in the organizational background emerged. The Football Academy of Debrecen is a good example for this process. It had to expend the size and number of the departments to keep up with the competition realized on the market of the youth development. In addition to the organizational changes, it had to rationalize the processes also. It was crucial to appoint an operational director, and to separate the managing director role from the technical director. The disbandment of the daily work into departments created a transparent organizational structure what is the base of the proper operation. Besides the development of the company, there are significant differences compared to a profit-oriented enterprise. The base of this is the differences noticeable in the income structure. While the professional clubs need departments handling the marketing and financial planning, the academy has almost all of his income only from the owners and the federation. These departments have less weight in the structure of the academy, because the focus is on the development goals, so the importance of social, educational, and sport-science section grows. In summary I can say, that we can realize a constant development in the sector, and in accordance with this, we can also see an advance in the organizational questions of sport companies.

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SCIENTIFIC PAPER

ANALYSIS OF VISION AND MISSION STATEMENTS CHARACTERISTICS AND THEIR ASSOCIATION WITH ORGANIZATIONAL PERFORMANCE: A GUIDE TO WRITING EFFECTIVE VISION AND MISSION STATEMENTS

Forest David

University of Debrecen, Faculty of Economics and Business, 4002. Pf. 400

david.forest@econ.unideb.hu

Abstract: This paper empirically examines vision and mission statements of Fortune 500 firms for the purpose of identifying and examining specific characteristics and associating these attributes with organizational performance. Additionally, this paper provides a theoretical foundation for the inclusion of various characteristics of vision and mission documents, and thus provides guidance for organizations to develop and revise these important strategic planning documents.

INTRODUCTION

Peter Drucker, known to many around the world as the father of modern management, was a proponent of organizations having formally written vision and mission statements. Drucker (1974) proposed early in his career that firms should ask three questions before engaging in strategy or any other formal aspects of planning: 1) Where are we going? 2) What business are we in? 3) How are we going to get there? Question 1 above is similar to the commonly used definition of a vision statement often stated as "what do we wish to become" and Question 2 is the currently universally accepted definition of mission. Question 3 by Drucker addresses the strategy and tactics used to execute both the vision and mission statements. Drucker's thoughts on firms having formal vision and mission statements, much like other aspects of his work, are articulated beautifully simple yet vitally important for success and survival in business today just as they were two generations ago during Drucker's time.

Increasingly today there is a growing need for organizations whether a Fortune 500 firm, a mom and pop business, a university, or a not-for-profit firm to have a clear vision and mission statement as the precursor to a detailed strategic plan. With the current climate of globalization, rapid transfer of information, and technological advancements, many mistakenly believe there is less need for a clear vision and mission as firms strive to adapt to survive. As firms are required to adapt more quickly now than ever before since customers are increasingly more demanding and discriminating in their purchasing habits. The latter forces firms to have a clear vision, mission and strategy.

This paper further develops the vision and mission statement literature and set up a series of hypotheses for empirically testing the characteristics of vision statements and mission statements. Additionally this paper will attempt to relate vision and mission statement attributes to firm performance; the main objective is to determine a set of vision and mission characteristics common among firms Specifically in this paper, 74 vision and 74 mission statements included in the most recent Fortune 500 list are critiqued in accordance with methodology set forth and statistical results will be tabulated.

Although there have been multiple papers studying mission statements components or their association to organizational performance whether it be direct financial measures or indirect customer satisfaction measures or employee responses

on a survey, there has been little research on vision statements. Also, to our knowledge, there has been little to no prior research on mission and vision characteristics. We define characteristics more broadly than components.

This paper attempts to address this shortcoming in the literature and provide a foundation for future vision statement research, provide a framework for writing mission and vision statements using characteristics commonly found in Fortune 500 firms' statements, and to examine the link on organizational performance and mission / vision quality from a characteristic perspective, which has not been previously addressed in the literature to our knowledge.

Literature Review

Today there are virtually limitless choices no matter the industry. For example with automobiles, customers now can purchase cars with almost unlimited features all tailored to specific customer needs. Similarly in the cosmetic industry there are virtually limitless choices, as is also true in the restaurant industry and countless other areas of business. The days of producing a product that will satisfy the needs of a large percentage of the population are vanishing. These new trends in customer preferences and demands is increasingly forcing organizations to have a clear, detailed, well conceived vision, mission and strategy.

Vision and mission development continues to be considered an important first step in strategic planning and several textbooks even devote a full chapter just to vision and mission statements.

A study by Alegre, et al., (2018) revealed mission statement articles in 20 different academic journals totaled to 53 from 1980 to 2014 with the largest number the five year period from 1995 to 1999 with 14 articles. The most recent five year period 2010 to 2014 had 8 such papers and the first period of 1980 to 1984 only had 2 papers written within the 20 journals studied revealing a steady trend of around 2 papers in the 20 academic journals studied related to mission per year since 1990. Of the publications studied, over 50 percent studied the association with mission and organizational performance, followed by researching mission statement components, impact on employees, and development. A recent paper by David, et al., (2016) studied mission statements as related to customer satisfaction.

Benefits of Quality Vision and Mission Statements

Although debate continues regarding whether effectively written vision and mission statements will lead to improved organizational performance, a meta-analysis by Desmidt et al., (2011) indicated mixed results on firm performance. King & Cleland (1979) indicated several intangible benefits of well written mission statements include: 1) clearly states the purpose of the organization to employees and managers, 2) prioritizes key resources both internal and external that aids in the formulation of strategies, 3) aids in allocation of resources, and 4) aids in organizing work activities around departments, segments, and divisions around a shared purpose. Another key advantage of well written mission or vision statements is they provide a means to resolve divergent views among managers in a tactful manner. For example, in a university setting faculty may have honest disagreements on the relative importance of research, teaching and service in assessing individual performance. Revisiting the firm's vision and mission statement is an effective way to diffuse such disagreements in a tactful manner.

Developing Effective Vision and Mission Statements

Discussed in detail under the respective vision and mission statement sections, there are characteristics, components, and attributes that are common within vision and mission statements. Firms should include as many managers as possible when writing vision and mission statements. Generally, firms should educate managers on what constitutes a quality vision and mission statement, remind managers of the strategy and goals of the corporation, and then ask them to develop their on respective mission and vision statements (David & David, 2017). Upon completion, top management should collect and merge statements into a single document and continue the process until an agreed upon vision and mission are developed. If properly developed, the final product will contain statements unique to the firm (David et al., 2014), be written in a quality manner consistent with vision and mission theory, and provide a robust level of commitment to the organization as many managers participated in the process.

Vision Statements

In business, having a clear vision provides the foundation for developing a mission statement. A firm must first know where it wants to go before it can determine its strategy of how it wants to get there. Research suggests that vision statements should be short, approximately once sentence in length and include as many managers as possible in developing the statement. Jeff Weiner, CEO of LinkedIn, was recently voted the best CEO in the United States and recently stated at a conference in San Francisco the single most important attribute of being an effective leader is articulating the firm's vision as meticulously and clearly as possible to everyone at the organization. Former CEO of Colgate, Reuben Mark is another large believer in vision statements, indicating, with respect to vision, it is best to push one vision globally than many different smaller messages in various different cultures. The vision pushed should be inspiring and not focused on financial means, as according to Mark, it is difficult to motivate employees into charging the machine guns (referring to the completion and their tactics) for purely financial objectives, there must be something more palpable, more meaningful than merely financial objectives.

Generally, a well-developed and thought out vision statement will provide improved direction for the firm and its stakeholders. Overall, the literature on vision statements is not as developed or robust as the prior literature on mission statements. One of the goals of this paper is to improve the theoretical contribution by developing improved insight on vision statement construction and its association with organizational performance.

Mission Statements

Unlike the vision statement literature, the mission statement literature is robust and well contrived in the literature lending itself for a detailed literature review and thereby supporting the foundations for new studies and insights that are rooted in previously accepted theory. Mission statements are often called by other names that include: creed statement, statement of purpose, statement of philosophy, and statement of guiding principles. Sometimes mistakenly, firms will call a mission statement by the name vision and a vision statement by the name mission. For purposes of this paper, mission statements answer the question proposed by Drucker "what business are we in" and vision statements answer the question "where do we wish to go." Drucker (1974) states the first step in a strategic plan is to answer the question "what is our business;" the answer is not as obvious as many managers believe. For example, an airline carries passengers and freight, but this does not satisfactorily answer the question what is our business. For example, what percent of freight or passengers does the airline carry? Is the airline a discount airline or more full service? Regional or International? Questions such as these more readily answer the question, what is our business and must be answered before organizational structure or future plans can be implemented (Drucker, 1974).

This goal ambiguity or more clearly mission ambiguity routinely leads various managers astray focusing on their own projects and goals rather than the larger organizational mission, often at the expense of organizational performance and employee motivation. Mission clarity has revealed a positive correlation with employee motivation (Jung & Rainey, 2011), organizational performance, employee satisfaction and goal commitment (Jung, 2013).

Mission Statement Components

One of the seminal works in mission statement construction was published by Pearce & David (1987) in the Academy of Management Executive. This article revealed eight components commonly found in mission statements of high performing firms. These components consisted of: customers, products & services, geographic region served, technology, concern for survival, growth and financial profitability, philosophy, core competences, concern for public image. Later work by David (1989) added a 9th component, concern for employees. The collection of data in this seminal article used the Fortune 500 firms, the same publication used in this paper.

A few published journal articles have examined mission statement components, but to our knowledge, no journal articles have examined the mission statement characteristics proposed in the David 17th edition strategic management book. Thus, a clear and needed opening exists in the literature on this issue, so we have the opportunity to make a significant contribution to strategic management in this area. The ten proposed mission statement characteristics that appear in the David textbook are as follows:

Characteristics of a Mission Statement

1.Broad in scope; does not include monetary amounts, numbers, percentages, ratios, or objectives
2.Concise; fewer than 100 words in length
3.Inspiring
4.Identifies the utility of a firm's products
5.Reveals that the firm is socially responsible
6.Reveals that the firm is environmentally responsible
7.Includes nine components: customers, products or services, markets, technology, concern for survival/growth/profits, philosophy, distinctive competence, concern for public image, concern for employees
8.Reconciliatory; resolves divergent views among stakeholders
9.Enduring but never cast in stone
10. Attracts customers; is written from a customer perspective

Source: David 17th ed. textbook, p. 49.

Prior research studied the nine components to determine if they were still applicable to mission statement construction assuming possibly the institutional forces of coercive, normative and mimetic pressures (DiMaggio & Powell, 1983) would drive mission statements of firms in similar industries to be more similar than a basket of firms in different industries (Peyrefitte & David, 2006). This was indeed the case as a sample of firms from 3 distinct industries indicated industry membership did play a significant role in components used. The study found the components of core competencies, philosophy, and concern for public image were all included in mission statements across all industries; along with components, customers, products and services, and technology that were also statistically significant on being included in mission statements.

Link to Performance

The seminal article published in 1987 in the Academy of Management Executive by Pearce and David (1987) revealed 8 components commonly associated with mission statements. 1) Customers 2) Products and Services, 3) Geographic Markets Served, 4) Technology, 5) Commitment to Survival, Growth, and Profitability, 6) Philosophy, 7) Self Concept (today referred to as Distinctive Competence), and 8) Concern for Public Image. Several years later a 9th component, Concern for Employees was suggested (David, 1989). In their article, Pearce and David concluded three of the eight components were statistically significant with higher performing firms. Higher performer firms were firms with a profit margin in the top quartile of all responding Fortune 500 firms. These three components were: Philosophy, Self-concept, and Public Image.

There has been substantial research since attempting to link the quality of mission statements to organizational performance. A meta-analysis in 2011 that focused on twenty years of research on mission statements indicated mixed evidence of mission statements boosting performance Desmidt, et al., (2011). There is a growing thought in business that with a rapidly changing world, strategy and vision and mission are not as important as they once were. As managers

focus increasingly on means that lead directly to performance, mission statement construction oftentimes takes a back seat and is met with less enthusiasm with managers (Baetz & Bart, 1996). Despite research suggesting managers possibly exhibit less enthusiasm developing a mission and vision, there is evidence in many journals that show a positive correlation between well written mission statements and firm performance indicating the importance of having a formal business mission.

Researchers studying American firms, Dutch firms (Sidhu, 2003), and Japanese firms (Hirota, et al., 2010) all suggest a positive correlation between firm performance and mission statements. While other research has revealed a positive relationship between desired organizational behaviors and well constructed mission statements (Bart & Baetz, 1998; (Bart, 1996). Bart and Baetz (1998) in fact found formally written mission statements exhibited Return on Sales significantly higher than firms with poorly written mission statements. A recent article showed a positive relationship with American Consumer Satisfaction Scores (ACSI) Scores and well written mission statements David et al., (2016). Germain and Cooper (1990) revealed mission statements written from a customer perspective had a positive impact on firm performance.

Despite some prior research showing a positive correlation between well crafted mission statements and organizational performance, many other papers showed no such relationship. Research on the topic has ranged from studying the relationships between profits and employee turnover Klemm et al., (1991), manager satisfaction on mission statements and firm performance. Other studies such as Vandijck et al., (2007) studied the relationship between quality written mission statements and employee behavior without significant findings. Further negative evidence on the importance of mission statements was reported where firms with and without a mission statement were compared on firm performance with no differences reported (Dharmadasa et al., 2012). One possible explanation on the inconclusive findings regarding mission statements' link to organizational performance is the lack of research using a accepted definition of mission.

Another possible reason explaining the lack of significance in having a quality mission statement and firm performance is most articles to date have not examined moderating variables' association with mission and firm performance. A paper recently published provided a series of propositions laying the groundwork for assessing management's commitment to the business mission Williams, et al., (2015). Williams provides four criteria to determine management commitment, including 1) communicating and identifying the core concepts that should be included in a mission, 2) involve as many managers as reasonably possible and from various functional areas, 3) set targets with respect to the mission, and finally to 4) review and revise the mission as necessary. However, despite these possible improvements and suggestions, little is provided here on implementing mission statements.

This important concept reveals the fact that despite the quality of the mission statement, if management is unwilling to adhere to the statement or struggles with implementing the statement, then simply analyzing the components or other attributes of a mission for its association with firm performance will restrict the chances of finding a positive statistical relationships.

A story told in some management circles describes an encounter between a manager and the CEO of the firm, as the manager was debating with the CEO that his new ideas could be formulated or implemented because of the firm's stated strategy. In the story the CEO asked to see the formal strategy document, crosses out the affronting passage and quipped, now we can proceed with my plans. The story, true or not, serves as example if mission statements are given such treatment then there would be difficulty in finding statistical significance. Another story illustrated in the above book, was when an employee came to his manager indicating he knows the mission of the company, he believes in the mission and he is currently with the customer but he is just not sure how to implement the mission.

Hypotheses

Hypothesis 1_n: Mission statements and vision statements will contain the same number of words.

Hypothesis 1_a: Mission statements and vision statements will not contain the same number of words.

Hypothesis 2_n: Mission statements will not average around 100 words in length

Hypothesis 2_a: Mission statements will average around 100 words in length

Hypothesis 3_n: The 4 characteristics will not be found in vision statements

Hypothesis 3_a: The 4 characteristics will be found in vision statements

Hypothesis 4_n: The 4 characteristics will be not found in mission statements

Hypothesis 4_a: The 4 characteristics will be found in mission statements

Hypothesis 5_n: There will be a relationship between vision statements containing the outlined characteristics and organizational performance

Hypothesis 5_a: There will not be a relationship between vision statements containing the outlined characteristics and organizational performance

Hypothesis 6_a: there will be a relationship between mission statements containing the outlined characteristics and organizational performance

Hypothesis 6_n: there will not be a relationship between mission statements containing the outlined characteristics and organizational performance

METHODOLOGY

Data Collection

Mission and vision statements remain commonly used. The sample used in his analysis revealed approximately 40 percent of Fortune 500 firms having both a mission and vision statement on their website, approximately 35 percent having only a mission statement and approximately 10 percent only having a vision statement provided on their website and over 80 percent of firms having at least one of the two documents posted on their websites.

In selecting mission and vision statements to analyze, a sample of 74 was drawn from the 2019 Fortune 500 list. This sample was deemed large enough to produce ample statistical power to find statistical significance if present. In addition, using the Fortune 500 has several key benefits. Most importantly, the sample "self controls" for many outside factors as all firms included in the Fortune 500 met the publication's criteria for inclusion. Using the Fortune 500 sample ensures firms are similar in nature. Secondly, using the Fortune 500 introduces less bias than if the researchers simply chose mission and vision statements in a nonrandom manner. Finally, the use of the Fortune 500 is common among many mission statement studies including Pearce & David (1987) and Peyrefitte (2012). Once the firms were determined through a random number generator, the researchers visited the respective websites and tabulated firms who contained a mission, vision, or both. Only firms who had both a published mission and vision were rated for this study. Previous work Peyrefitte, (2012) sent formal letters to Fortune 500 firms asking for copies of their mission statements receiving 353 replies. Pearce & David (1987) received 218 replies to a similar inquiry but only deemed 61 responses to be a usable mission statement for analysis. With improved transparency and ready access to the Internet, we feel our approach outlined above is appropriate for sample collection. In addition, we believe our sample size of 74 is sufficient based on academically accepted sample sizes smaller Pearce & David (1987) with 61 Peyrefitte & David, (2006) with 57.

In attempting to determine what characteristics are common in mission and vision statements, we drew from the guidelines and suggestions provided in David et al (2020) mainstream textbook Strategic Management and our own personal review of mission and vision statements not used in the study to help determine the list of characteristics common among both vision and mission statements. We determined visions and missions each had 5 characteristics each which are provided below in detail along with the coding scheme with corresponding Cronbach's alpha coefficients calculated.

Cronbach's Alpha

There were two raters of data and George and Mallery (2003) provide the following guidelines for accessing the quality of Cronbach's alpha readings are provided in Figure 1.

Figure 1

> 0.90	Excellent
0.80 – 0.89	Good
0.70 – 0.79	Acceptable
0.60 – 0.69	Questionable
0.50 – 0.59	Poor
< 0.50	Unacceptable

According to Spector (1992) an appropriately designed scale should address 4 attributes

1. Scales should contain multiple items that are able to be combined for summation.
2. Measurements between items should vary quantitatively as opposed to qualitatively.
3. There should be no right answer among the choices. For example, a multiple choice exam asking the capital of the USA, only Washington DC is the correct answer thus excluding questions with single right answers.
4. Scale items are statements where raters will provide their best judgement rating about the statement.

Characteristics and Coding Scheme

The coding scheme was selected after 1) careful study of vision and mission statements and 2) adapted from prior suggestions in the David, et al., (2020) Strategic Management textbook by Pearson. Coders discussed the coding system on a sample of mission and vision statements not used in the analysis to ensure clarity was present before proceeding with the actual coding of the sample used. A 1 to 3 rating system was used for all factors other than word count, where a raw number was utilized. The 1 to 3 coding system is common in other articles on mission statements within the literature. Note Inspiring was selected as a characteristic of both vision and mission statements for research.

Vision Statement Coding Scheme

1. 1.Clear – Identifies the traditional definition of a vision statement answering the question "what do we wish to become" In addition, the Clear characteristic should identify the firm's industry to receive a higher rating. 1) Does not address the question "what we wish to become" in any regard, the statement is simply a slogan. For example, good ethics is good business or the customer is king. 2) Makes a minimal attempt to answer the question what we wish to become but is extremely vague and could be used for many industries; for example, we wish to become the top customer service firm in the world. This statement could be used equally for McDonald's or

Airbus. 3) Addresses what the firm wishes to become and mentions the industry at least indirectly but is vague. For example, we wish to be the best restaurant or we wish to be the top selling restaurant in the world or more specifically such as to becoming renown throughout the United States as providing the most nutritious and healthy Mexican food options.

2. Futuristic – Forward looking, indicates the firm's aspirations over the next several years. 1) Statement provides little to no wording that could be judged futuristic in nature. For example, We conserve resources and make people happy. 2) provides at least some inclination of the future concern our outlook. For example, At ACME company we will continue to provide our customers automotive and home insurance needs and adapt as needed. 3) provides a more detailed inclination of the future concern for the firm.
3. Concise – Vision statements should only be a few words in length, shorter is better, and around one sentence in length. A total word count was utilized here.
4. Unique – What does the firm specialize in, what is the firm's competitive advantage, what makes the firm different from rivals. 1) The firm's vision statement includes no mention of its uniqueness or competitive advantage, for example, our vision is bringing smiles around the world 2) The firm's vision statement has words that may discuss uniqueness, competitive advantage however they are vague and at best only limit some possible industries from likely using the exact same vision statement yet still broad enough that many business in differing industries could use the same statement. For example, quality is what drives our success and remains our vision. 3) The firm's vision statement is specific enough that only firms in the same industry or sector could reasonably use the exact same statement. For example, We strive to become the premier compounding drug firm in the world, matching drugs to specific individual needs rather than a one drug fits all approach.
5. Inspiring – deriving from CEO Mack and others, motivates employees and customers to support the organization. 1) Only mentions being the best or profits, no mention of words that will inspire employees or customers to be great or support the firm for reasons other than growth or profit. For example, We want to be the top airline company in Europe. Or we care about customer and employee excellence in the food we sell or, we strive to produce the best wind turbines in the world. 2) Mentions words that can be viewed as inspiring but the overall statement is not specific and could be used for any firm in any industry. For example, we value relationships over profits or good ethics is good business 3) Mentions words that clearly inspire stakeholders to support the company for reasons other than mere utilitarian reasons. For example, We strive to produce the most efficient wind turbines in the world, leading to a cleaner earth and more efficient energy for generations to come.

Mission Statement Coding Scheme

Factors selected for analysis of the characteristics of mission statements include the following

1. Clear. Answers the question what business are we in and distinguishes the business from others. 1) Provides a mission but does not address the question what business are we in or addresses such that could be used for multiple firms in differing industries. For example, we help people from all around the world. 2) Answers the question what business we are in, but is not expanded upon and could be multiple businesses. For example, We are committed to serving fresh food. Here this could be any type of restaurant. 3) Clearly answers the questions what business we are in. For example, we are in the fast food business specializing in burgers and fries.
2. Broad in scope; does not include monetary amounts, numbers, percentages, ratios, or objectives. 1) Mission makes reference to both objectives and includes numbers, percentages, or ratios. 2) Mission makes reference to only objectives or includes numbers, percentages or ratios, but not both. 3) Mission does not include objectives or numbers, percentages or ratios.
3. Concise in nature. At total word count was used here. Generally around 100 words.
4. Inspiring – 1) Only mentions being the best or profits, no mention of words that will inspire employees or customers to be great or support the firm for reasons other than growth or profit. For example, We want to be the top airline company in Europe. Or we care about customer and employee excellence in the food we sell or, we strive to produce the best wind turbines in the world. 2) Mentions words that can be viewed as inspiring but the overall statement is not specific and could be used for any firm in any industry. For example, our vision is to put people first in everything we do. 3) Mentions words that clearly inspire stakeholders to support the company for reasons other than mere utilitarian reasons. For example, We strive to produce the most efficient wind turbines in the world, leading to a cleaner earth and more efficient energy for generations to come.
5. Written by describing products in a utilitarian nature. 1) No products or services are described 2) products or services are described but only referred to literally such as "railroads" or "pharmaceuticals" 3) Products and services are described but referred to in a utilitarian nature. For example, instead of railroads the word "transportation" is used or instead of pharmaceuticals the phrase "healthier world" is used.

Cronbach Alpha Results

Assessing Cronbach Alpha results, which is a measure to test interrater reliability results, were positive. Only one variable of the 8, "Vision Future" produced a questionable result below 0.70 in Figure 2 below. However, only one variable "Mission Clear" produced a good result over 0.80. All variables but "Vision Future" were over 0.70 so reliability is to acceptable standards. Based on the reliability results, 8 new variables were created in SPSS averaging the ratings of the two raters to create a composite score. This composite score was used in all subsequent analyses.

Figure 2

Vision Clear	0.708
Vison Future	0.618
Vision Unique	0.753
Vision Inspiring	0.772
Mission Clear	0.813
Mission Broad	0.733
Mission Utility	0.732
Mission Inspiring	0.762

RESULTS

Hypothesis 1 was tested using a paired samples t-test in SPSS. The null was rejected in favor of the alternative with the average mission statement including approximately 33 words compared to the average vision statement containing 19 words. Significance level was at the 0.000 level and a t-calculated value of 3.84. While there is no research to our knowledge that has tested vision and mission length, mission statements are generally thought of to be longer in length. Using the two-tailed test outlined above over a directional test, it is strongly supported statistically and practically that indeed mission statements are longer in length than vision statements.

Research by David et al., (2020) suggests that mission statements should be no longer than 100 words in length. For Hypothesis 2, testing the average word count for mission statements using 100 words as the test value the data was significant at the .000 level with average words of 33 are corresponding t-calculated value of -19. These results suggest, in practice mission statements are generally statistically much shorter than theory suggests and one can comfortably argue practically shorter as well. The null hypothesis was not rejected in this case. New direction for writing mission statements can be updated to be shorter in length than previously thought.

Hypothesis 3 and Hypothesis 4 were examined to determine if the four new characteristics associated with vision statements were actually present. This research has never been empirically conducted before to our knowledge. A one sample t-test was performed with 1.0 used as the test statistic. Based on the coding scheme outlined earlier in the paper, a rating of 1 indicates the firm had a respective vision or mission statement however the characteristic was not present. Ratings of 2 indicate the characteristic was present while ratings of 3 indicate the characteristic was not only present but in addition was expanded upon. All 8 characteristics had scores ranging from 1.86 for average score (average rating of both raters) Mission Clear to 2.78 for average score Broad with their respective t calculated scores of 9.38 to 36.94 respectively. All t calculated scores were significant at .000. These results are compelling that Fortune 500 firms are including all four characteristics routinely in their vision statements and all four in their mission statements.

Figure 3 below reveals all characteristics for both mission and vision were statistically significant. Coupled with the high interrater reliability these findings are compelling for the first time providing an empirically tested framework for vision and mission statement characteristics in support of the alternative hypothesis for both Hypothesis 3 and Hypothesis 4.

Figure 3

Characteristic	N	Mean	T-Calculated	Significance
Vision Clear	74	1.87	9.94	.000
Vision Future	74	1.89	11.36	.000
Vision Unique	74	1.97	10.73	.000
Vision Inspiring	74	2.07	17.09	.000
Mission Clear	74	1.86	9.38	.000
Mission Broad	74	2.78	38.40	.000
Mission Utility	74	1.98	11.08	.000
Mission Inspiring	74	2.09	15.06	.000

Running regression analysis using the enter method in SPSS on the four mission characteristics, no significant results were found using ROE, ROA, Revenue, Profits, EPS, 10 year average EPS and 10 year total return average to shareholders as dependent variables. Likewise running the same analysis on the four vision statement characteristics no significant results to financial performance was found. Results here were conclusive that well written vision and mission statements had little effect on firm performance. These findings are in agreement with much of the previous literature but also in disagreement with some literature. There continues to be a debate on the correlation between vision and mission statements and firm performance. Our findings of no statistical correlation between financial measures and vision and mission characteristics is not to say vision and mission statements are not important or firms should not attempt to include components and characteristics in mission statements. Simply many other factors play into performance.

New Contributions

1. Determined needed characteristics of a vision and mission statement through examination of their association with organizational performance.
2. Determined characteristics which are commonly used in vision and mission statements.
3. Determined word count used in vision and mission statements.
4. Provided a framework for writing effective vision and mission statements based on characteristics commonly used by Fortune 500 firms.

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CONCLUSIONS

This article's purpose serves several areas to provide a comprehensive literature review on mission statement importance evolution in the literature which includes 1) provide a discussion on mission statement components and 2) provide a discussion on the link between mission statements and organizational performance whether performance be a traditional financial number or a more abstract factor such as customer satisfaction scores or employee commitment and 3) this paper's main contribution was to provide a set of characteristics commonly used in vision and mission statement construction. Despite the research on mission statements, very little research has been performed on vision statements, and no research has been performed to my knowledge examining clearly characteristics associated with both vision and mission statements.

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SCIENTIFIC PAPER

EXAMINATION OF THE HUNGARIAN ESPORT ECOSYSTEM THROGH INTERNATIONAL EXAMPLES

[1]Anikó Molnár, [2]János Sánta, [3]Gergely Gábor Ráthonyi

University of Debrecen
[1]Institute of Rural Development, Tourism and Sports Management
[2]Computer Science Engineering
[3]Institute of Applied Informatics and Logistics

[1]miller.e.annie@gmail.com
[2]janos.santa87@gmail.com
[3]rathonyi.gergely@econ.unideb.hu

Abstract: Esport was very close to be medal awarded competition at the 2022 Asian Games, finally esport excluded from the Asian Games but all is not lost that is delayed. We have come a long way since the first real esport tour-nament, for which the first-place prize was a year-long Rolling stone maga-zine subscription. Nowadays in the digitalized world esport develops faster than any other sport, and plays an important role in the entertainment in-dustry as well. Stadiums are crowded, streams are watched by millions worldwide, and the pace doesn't seem to ease up in the future either. As Hungary is trying to step onto international waters, our main goal was to make a comprehensive review of the Hungarian esport ecosystem analyz-ing the national picture of electronic sport. Although there is not much do-mestic literature regarding the topic, as a secondary research we choose to use available Hungarian papers to piece together a comprehensive picture. We move on step by step through the biggest stakeholders: the publishers, the biggest domestic competitions, the most successful players, platforms, brands and of course the fans in domestic circles.

Keywords: *esport; esport ecosystem; Hungarian esport; national review*
(JEL Classification: *Z29*)

INTRODUCTION

ESPORT is a fairly "new" worldwide phenomenon with its first ever docu-mented tournament dating back to the early seventies. Esport cultivated its first generation of esport players from the Computer Science majors of the University of Stanford and there was no turning back since then. Although the fast development of esport was advanced with such milestones as the internet and world wide web uptake in the late nineties, which connected the players on a global scale, the most dynamical phase of its development started in the 2010's. Because of its fairly newness, esport still hasn't reached its full potential, but is entering a new phase toward becoming a mature market (NEWZOO, 2017).

Because of these reasons in particular we believe it is important to analyze and understand its general rules, processes and its nature.

First of all, let's see what does esport exactly mean. It is important to point out, that a generally accepted definition of esports does not exist (OLSEN, 2015). The collected literature has and uses multiple definitions to describe this activity.

In order for our research framework to develop we took into account the most used definitions and analyzed its meeting points, from which we identified 3 major criteria for esports to be characterized by. From these key points esport can be described by the following: an activity performed in virtual environment in competitive settings in which people develop and train physical and/or mental abilities.

The analyzation of the definitions outlined a possible answer to a widely debated problem in literatures and esport subcultures as well: Does esport considered as sport?

Looking at the definition of sport in Article 2 of the European Sport Char-ter: "Sport" means all forms of physical activity which, through casual or organized participation,

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aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in com-petition at all levels. (EUROPEAN SPORT CHARTER, 1997).

The viewpoint of those favorizing the game suggests that esport reflects the main aspects of sports such as interpersonal competition, development of skills and abilities, the enforcement of rules, attainment of goals, and even levels of coordination and agility (CRAWFORD and GOSLING, 2009).

The criteria taken from the definitions discussed above, compared to the definition of the Sport Charter, suggests that the main essence of sport such as competitive activity, improving physical and mental fitness and achiev-ing results at different levels of competition are all in line with the defini-tion of the Charter. On this basis, in the next stages of our research, we consider electronic sport as a sport and examine it accordingly.

BRIEF HISTORY OF ESPORTS IN HUNGARY

The first signs of the todays known esport in Hungary appeared in 1990-'93, when a television show called "Elektor Kalandor" in which Super Mario could be played on NES (Nintendo Entertainment System) consoles started to captivate the home screens (PWC, 2018).

The first bigger esport series started in 2000 named as EarthQuake with sponsors like Samsung and the World Cyber Games, later on even renamed after it as World Cyber Games Hungary. As Counter Strike got to left out the series started to lose its popularity. It didn't disappear completely how-ever, and went on as the Budapest Game Show, after another name change, it took its present form in the form of PlayIT, held every year (FLANCHER, 2019).

Other esport events started to emerge such as qualifier of the Electronic Sports World Cup, the Gody LAN in 2005, the BECUP in 2007, and ICL in 2009 (FLANCHER, 2019).

The breakthrough came with the cooperation of PlayIT and the Esportmilla (One million people for the Hungarian Esport movement). Because of this agreement PlayIT started to incorporate esport competitions to its program. Due to the rising popularity of these competitions they organized the first esport focused event the Esport Fest.

In 2017 the Hungarian Government decided to give 2 billion Huf to the Eportmilla for an esport championship and conference to be organized (FLANCHER, 2019). The main goal was to bring the international esport closer to the countries of the Visegrád Four (Czech Republic, Hungary, Poland and Slovakia).

The V4 Future Sports Festival was very useful in that it drew attention to esports in the region and showed that this can be done in Hungary as well, it became clear that there is a willingness to cooperate at regional and even European level, for example by bringing together different associations (FLANCHER, 2019).

After the event it also became evident, that in order for Hungarian teams to catch up to the international level a structural base is necessary.

To support this idea traditional sport clubs started to integrate esport teams in to their clubs or formed new esport departments.

After this the next step was the establishment of the HUNESZ (Hungarian E-sport Federation) in august 2018, which main goal was to bring together these organizations and to help participants to enter the esport market (FLANCHER, 2019).

Up until today their most important achievement was undoubtedly the launch of Hungary's first multi-game league series, the Hungarian National Sports Championship last September, where teams could compete in five different games (League of Legends, Counter-Strike: Global Offensive, PlayerUnknown's Battlegrounds, Hearthstone, Rainbow Six Siege).

With this Championship the aim shifted to the structural base, as the main goal was to bring in stability.

It is very clear that Hungary is definitely on its way to help the national esport scene to grow.

MATERIAL AND METHOD

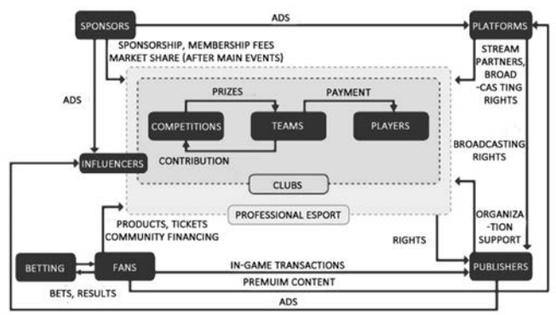
From the brief history it is evident, that because the development of Hun-garian is fairly recent esport is only starting to get recognition. The lack of literature of Hungarian esport supports this fact too, as up until 2016, there was almost no official research in Hungary with data and details on the esport market (SZABELLA, 2018). For us to see the differences from the major esport powers we need to get a clear national picture. Now as it was mentioned before there are only a few researches. In our research we col-lected these existing papers and our main goal was to get a relatively com-plete review of the national esport's situation. As a secondary research we used the method of document analyzation with which we studied national and international literatures as well.

To get qualitative datas we analyzed the national esport market report of the PricewaterhouseCoopers as well as the national survey of eNet.

RESULTS

In order for us to analyze the key components of the Hungarian esport ecosystem we need to take a look at the overall picture and understand its networks and processes. Figure 1. shows the main model of the ecosystem.

Figure 1. The model of the Hungarian Esport Ecosystem



Source: Own editing based on PwC (PWC, 2018)

The six key components of the model are the game publishers, the media platforms, the players and teams, the competitions, the sponsors and the fans.

Each and every components or "participants" has their own revenue. The heart of the ecosystem are the players/ teams. Without them there wouldn't be a content to watch or follow. Another key element is the competitions as they are the main subjects of esport. We can not forget about the game publishers either as they provide the games, they sell the competition and broadcasting rights so their role in the whole ecosystem is decisive. With the publisher's games through competition players make content. And with platforms contents (such as competitions, streams and analyses) reach the viewers (PWC, 2018).

The Publishers

The most involved Publishers in Hungary are Riot Games, Valve Corpora-tion and Blizzard Entertainment. With the unbreakable popularity of League of Legends (61%) the top 5 most popular esport games in 2018 were: Riots: LoL, Valve's: Counter-Strike: Global Offensive (49%), Blizzard's: Hearthstone (38%), PUBG Corp's Playerunknown's BattleGrounds (35%) and Electronic Arts': FIFA (20%) (ENET, 2019a and 2019b).

As from the statistics can be seen we get a colorful picture regarding the genres of the most popular games, from CS: GO's and PUBG's FPS (First person shooter) games, to the best of MOBA (Multiplayer online battle arena) namely the LoL, and sport games like FIFA.

Broadcastings

From the aspect of the ecosystem platforms play a role of great importance as they are the link between the players/ teams and the viewers. They also serve as the main channel for media contents to be streamed and as a mar-keting and sponsorship tool as well.

Besides being a revenue provider by streaming players contents, this new media type helped the evolution of esports by opening a new and easier way of talents to be discovered.

In Hungary the population of these platforms follows the international trends closely.

In domestic circles the most popular is the game stream market leader Twitch.tv. Since its establishment in 2011 the numbers of monthly viewers reached 100 million (Needleman, 2015). And in January 2019 alone 63 700 people streamed 1.9 million hours of live video content (PANNEKEET, 2019).

The websites main attractions are that its completely free, it provides the viewer live rankings regarding the currently most viewed events. Thus, can be used, to find the most popular titles and events and streams as well.

Besides Twitch.tv the Google LLC. owned YouTube entered the market as well. From Google's unsuccessful attempt to buy Twitch in 2014 the con-currence is evident in trying to up Twitch's viewership. By streaming live esport content in its website Google combines You tube's traditional video services with esport streaming. Although not as effective as its counterpart it seems to be working as in January 2019 22 000 people streamed on YouTube, producing 460 000 hours of live content (PANNEKEET, 2019).

On the third step of the podium is Facebook. In 2017 Facebook made an agreement with Electronic Sports League (ESL) to stream 5500 hours of esports content to its users (NEEDLEMAN and SEETHARAMAN, 2017). With its 2.41 billion monthly active users (NOYES, 2019) Facebook and ESL seems to be on the right track to reach more and more people. And to top it all they didn't agree on exclusivity, thus besides reaching into new grounds ESL still uses other platforms as well.

Besides connecting the players, their contents and the viewer the network and connectivity of the platforms extends through ads to the sponsors and with broadcasting rights to the publishers as well.

The Players and Teams

The eNets latest esport survey shows that the number of videogame players in Hungary reaches the 60% of the total population. Although at first glance the 3.7 million players seem a lot, it is because of the wider interpre-tation of the definition of videogame players. It includes those who play casually at least once a week and either on PC, on mobile phone, or on other type of consoles, either online or offline. The demographic picture also shows that the most active age group with 66% participation is be-tween 18 and 25. And although men are more likely to play, one in every two women likes plays video games as well (ENET, 2018a and 2018b).

ENet distinguishes between casual and hardcore gamers depending on the time spent playing. While three-quarters of video game players play at least once a week, they spend relatively little time playing these games. The most typical time spent playing a week is 1 to 2 hours (36%) and 3 to 5 hours (25%). Quarter of those playing weekly play up to one hour a week - typically those who play because boredom, waiting, or traveling.

The future generations seem to catch up as well, as near half of the under-18 age group (48%) plays some type of videogame, with boys (57%) still dominant over girls (35%).

The numbers of the so called "hardcore gamers" (playing up to 20 hours a week) doubled up from 2016, when their numbers were estimated to be 200 000, in 2018 it is close to 425 000 (ENET, 2019a). They are those playing esport games, and/or participate in competitions- and/or in esport events. 11% of the hardcore players can be considered as esport players with 92% male and only 8% female players.

Although the base of the national esport players is relatively small, there are still great results achieved from national esport players. The non-exhaustive list of some of the best Hungarian esport players and their suc-cesses are the following:

The half Hungarian professional esport player Jeromé "shiddy" Tóth achieved his biggest success in 2005 as a member of Team64. Shiddy is a CS 1.6 player who with his team won the first ever season of ESL, he also ended up on the podium nine times in the German Championship, and after transferring to n!faculty in 2008 won the French Migane Lan (LEET, 2019).

In 2018 Dániel Bereznay entered the narrow elite of best simulator Formu-la 1 drivers out of nearly 66 000 riders. During the Series Bereznay was signed with the reigning champion Brendon Leight by Team Mercedes, and with an outstanding performance earned 2nd place behind Leight (LEET, 2019).

One of the most successful Hungarian esport player (LEET, 2019) the barely 18 years old Gábor "Gabihno" Szirtesi, who won 1st place in Fifa in the 2018 V4 Future Sports Festival. After winning first place he qualified to the FUT eWorld Cup playoff. In 2019 after winning the Ziggo eBattle Finals Gábor was signed by the Dutch esports organization AFC Ajax.

The best Hungarian LoL player, Tamás Kiss, known as Vizicsacsi is not only a prominent player in Hungary, he is also among the best toplaners on the international scene. In 2014, he qualified in the EU LCS with the Uni-corns of Love team (which other Hungarians have never succeeded in and since then no one has been able to repeat) (LEET, 2019).

By winning Asian dominated HoN Tour Season 3 World Finals "Fusen" Róbert Flick earned his championship title with his team Bad Monkey Gaming in 2015 (LEET, 2019).

Adrián "Raisy/Nofear" Birgány is known for his 2017 Quacke Champion-ship win in Denver.

Hungary's second best LoL player after Vizicsacsi is Dániel "Bluerzor" Subicz, whose first big team was the French GamersOrigin with which he won almost every French cup. After that he was signed by the Spanish team Movistar Riders (LEET, 2019).

Balázs Kodiak" Török was the member of the team KO who win the first ever World Cyber Game qualification in 2001. After switching to Counter Strike Source in 2005 Kodiak with his team finished WCG in 1st place again qualifying to travel to Singapore. Where the Hungarian team was ended up in the top eight. Later, they were invited to the European Championships, where they played the semi-finals (LEET, 2019).

One of the best and most popular female esport player in Hungary is Niko-lett "Nylon" Keszeli. Nikolett is a Counter Strike player, who ended up in 2nd place of the Electronic Sports World Cup in 2015 with her team and in 2016 they won the Intel Challenge Katowice (FLANCHER, 2019).

In terms of the esport players and teams 2017 was a turning point, as 5 esport departments were formed.

One of the very first is DVTK, sport club of Diósgyőr with the intent on forming teams, giving more opportunity to compete even on international scale. They were followed by MTK and the sports club of Debrecen: DVSC with their main focus on FIFA.

Honvéd's Lenovo Legion Honvéd Esport Academy entered the stage with the biggest capital in 2018.

A good example of the bottom up organization is from Debrecen as well, with the University of Debrecen Athletic Club's esports department the DEAC Hackers formed in 2017. Without budget their motivation was sole-ly the love of eports. Their main goals are to promote esports in Hungary and in University, to better understand the relationships between university sports life, competitive sports, interdisciplinary university research and electronic games, the game culture, exploration, accumulation and systema-tization of knowledge. Organizing the societal power of electronic games, supporting e-sports organizations with similar embeddedness, and in the long run, talent research and talent management in the region, and globally, "brain drain" to DEAC-Hackers, our university (DEAC, 2019).

The Competitions

Depending on its way of organization esport competitions can be catego-rized the following:

Bottom-up approach: This type is a mass-based competition. Teams get to the top of the list through qualifiers. The system itself does not involve any financial commitment for the teams, there is no entry fee. Anyone start in the qualifiers and through that, if he is talented enough, he can reach the top, giving each player motivation to compete (SZABELLA, 2018).

The Top-down approach: With the commercialization of esport Blizzard Entertainment launched its first Overwatch League to the shape of the American closed league traditional sport system. With this the aim was to combine full professionalism with e-sports and digital global promotion of sports (SZABELLA, 2018).

By the number of competitions esport competitions can be categorized into two groups as well.

Single competitions include only one event organized separately where players can compete to get a title.

Series where different events are held for different titles. These types of competitions have a lower prize pool than the single ones, but attract more viewers due to the different genres of the games.

By its nature esports competitions can be divided into Online competitions, whereas the name suggests players are registered and connected on online, and Offline competitions, where players are in the same place at the same time while competing against each other. These types of events have much higher costs due to traveling, accommodations and the virtual infrastruc-ture. Usually bigger Finals are held this way (SZABELLA, 2018).

From domestic circles there are two main events we would like to highlight. The first is the V4 Future Sport Festival, which was held in 2017 for the first time. Besides pointing out that there is a possibility for the countries of the region to organize successful esport events, the main goal was to bring international esport closer and to aim the focus on the possibilities of es-port (FLANCHER, 2019).

During the two days of the Festival players can compete in different games with the region's best teams. The two main games are the Counter Strike: Global Offensive and the Fortnite Battle Royale, but players can compete in games like FIFA, Tekken7 etc. as well.

The organization of the Festival is supported by the Hungarian Govern-ment.

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The other main esport tournament is the Hungarian National Esport Cham-pionship (MNEB).

One of the main differences between the two is, that MNEB is solely mar-ket based with its 15 million Huf prize pool thanks to sponsors like K&H and Telekom (FLANCHER, 2019).

The competitions of the latest season were online based with only the fi-nals held offline. Where players and teams competed in LoL, CS: GO, PUBG, Hearthstone and Rainbow Six Siege.

MNEB held its first ever season from 14th of January to 30th of April 2019 and managed to get more than 700 000 viewers to tune in to its finals in April.

Sponsors

190 million hours, the equivalent of 21 700 years. That's the amount of time spent watching the four biggest esport tournaments in 2018. There is no question that the popularity of esport is rising drastically. Because of this reason in particular it is no surprise that with its business potential sponsors see it as a perfect marketing tool. The global marketing research firm Nielsen with its Esport24 system measured the value of sponsorship appearances in the finals of this year's biggest eSports championships. Ac-cording to the report, it fluctuated between $ 75 000 and $ 17 million (ZSÉDELY, 2017), the later points out the opportunities and the overall picture of the fluctuation highlights the gap between this opportunity and the utilization of it. Another positive aspect of the use of esport as a mar-keting tool comes from the fact, that its consumers and their interests are very defined which makes them a really good target group for sponsors.

Although there is no exact data regarding the esport sponsorship in Hunga-ry the market research published by PricewaterhouseCoopers (PwC) about Hungarian esports categorized revenue into 5 groups. From which sponsor-ship and advertising takes the biggest slice with almost 60 percent. While sponsors contribution to this is 360 million dollars globally, advertisements give 170 million to the budget (PWC, 2018).

As the biggest source of revenue sponsorship can be subdivided depending on whether to sponsoring players, teams or events. According to Pwc event sponsoring has the biggest cost of all, but is the safest, since player and team results vary too much, on the other hand sponsoring winners can pro-vide high returns for companies (PWC, 2018).

Because of the male dominated nature of esport brands targeting male au-diences use esport as a marketing tool (such as Gillette, Monster, Red Bull etc.) Besides them IT companies can benefit from esport the most, since from the estimated size of the Hungarian esport market in 2018 (24 billion Huf) the purchase of hardwares and peripheries account for the most of the spendings (44.5%, 10.7 billion Huf) (ENET, 2019a and 2019b).

The Fans

The size of the Hungarian esport market reached 23 billion huf in 2017. While in 2016 only one-fifth of domestic Internet users heard about e-sports, in 2017 this proportion had risen to one-third of the population aged 18-65 (ENET, 2018b).

As for the viewership of the competitions, the 2019 season finals of the Hungarian National Sports Championship were watched by 714 715, for more than 9.4 million minutes via the event's official stream channels with 412 415 unique viewers (FLANCHER, 2019). It is without question that the national esport culture is rising.

According to the PwC's market report, those interested in esports are main-ly between the age of 18 and 34 (69%), they are from mixed races, the average age is 28, they have one or more smart electronic devices, and typically have high purchasing power (PWC, 2018).

CONCLUSIONS

With the lack of domestic literature regarding the Hungarian esport and with its drastic changes our main goal was to get an overall picture from economic prospect of the national esport ecosystem's situation.

From the actions of the last decade it is clear that Hungary see potential in the future of esport. There are clear efforts from both Governmental and from civil side as well.

As from the ecosystem can be seen Hungary is following the trends of the international esport market. The numbers of viewership and the players are rising steadily. New competitions and organizations are forming. The at-tempt to develop a stable structural base is with no doubt a huge step in to the right direction. But because of the specific nature of the esport players, for a small competitive player base to develop a large player pool is cru-cial.

With esport bars emerging country-wide, Sport Clubs forming esport de-partments and training gets more focus a rise in the quality of the Hungari-an esport is expected in the future.

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SCIENTIFIC PAPER

RELATIONSHIPS BEETWEEN COPING STRATEGIES AND PSYCHOACTIVE SUBSTANCE USE

Danica Keczeli

Clinical- and sport psychologist
University of Debrecen, Faculty of Economic Sciences,
Department of Sport Economics and Management, Debrecen

keczeli.danica@cts.hu

Abstract: The study examines the relationship between coping strategies and smoking and alcohol consumption among athletes, recreational athletes and non-athlete individuals.
The factors examined were measured by a validated questionnaire version of Folkman-Lazarus (1980) (Ways of coping) (16 items) and asked about the smoking and alcohol consumption patterns of the respondents. The total sample number was 813 people, of whom 341 were athletes, 292 were recreational and 180 were non-athletes. 54.4% of the sample is female and 45.6% is male. In my research, I focused on mapping intrapersonal coping strategies among athletes, recreational athletes, and the non-athlete individuals, and explored gender differences. Furthermore, how smoking and alcohol consumption appear as a negative coping strategy in the measured sample.
As a method besides descriptive statistics the Kolmogorov-Smirnov test was used to verify normality, and the hypotheses were tested with non-parameterized test (Kruskal-Wallis, and Mann-Whitney).
For coping strategies I found a significant difference among the non-, recreational and competitive athletes, and there is a significant difference between genders as well.
In the case of cognitive restructurings, there was a significant difference in favor of sports and recreational athletes versus non-athletes, while in problem analysis and passive coping I found a significant difference in favor of women compared to men.
Significant differences were also found in the case of psychoactive substance use. Among the three groups, as the intensity of sport increases, the number of smokers decreases. In the case of smoking, a significant difference was found in the coping strategies referring to reduction of the stress in the whole sample. In the case of alcohol consumption, in coping strategies were found significant differences between stress reduction, problem analysis and passive coping.

Keywords: *coping strategies, leisure sports, competitive sports, non-athletes*

INTRODUCTION

Appropriate management of frustration- and conflict-laden situations greatly influences our interpersonal relationships and has a great effect on our professional efficiency as well as psychological and health condition (McMURRAN AND McGUIRE, 2005). In today's world so full of stress (especially in competitive sport, where stress, performance centricity and the danger of injury are always present) it is necessary to familiarise ourselves with the intrapersonal coping modes that people can use to react to both external and internal impacts. Studying and learning coping strategies can promote the development of the selection process and can also serve as a yardstick during the sportspeople's training process to ensure the most effective work possible since, in addition to secure efficiency, one of the many aims of competitive sport is to prepare healthy people for civilian life.

With regard to coping strategies, we distinguish between positive and negative ways of coping, much like in the case of stress. During positive coping mechanisms, no side effects occur while during use of negative ways of coping there are some kind of harmful effects. According to this, positive ways of coping are sport, relaxation, humour, laughter or crying, whereas some examples of negative ways of coping

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are alcohol consumption, drug use or (over)eating (KOPP, 1995). Negative coping strategies can be useful during the coping process while they carry some kind of risk, too, as, for example, smoking can cause health problems.

Sport is a positive coping strategy since an appropriate degree of sporting activity is capable of reducing tension, can restore the body's balance and has no harmful side effects. Sport plays an important role in the prevention of the formation of harmful habits (PIKÓ, 2000; MIKULÁN ET AL., 2010). However, there is some research that questions the role of sport, and, within it, competitive sport, as a protective factor against alcohol consumption and smoking (VINGENDER, 2003).

The coping mechanisms that we use influence our decisions regarding behaviour, including our health behaviours (PLUHÁR AND PIKÓ, 2003). In this study I placed particular emphasis on mapping and assessing coping mechanisms among competitive and leisure time sportspeople as well as non-athlete individuals. I also examined how alcohol consumption and smoking appear on the examined sample as negative coping strategies. Furthermore, I examined the differences between male and female individuals.

II. LITERATURE

Coping strategies are cognitive, psychological and behavioural patterns used by people to overcome, reduce, or tolerate the hardships of a stressful life situation. This effort does not necessarily appear as some kind of action; instead, it can represent a certain notional-emotional relation. Cognitive recognition of the noxious nature of the situation is a necessary condition for the appearance of coping behaviour.

Any situation in which interaction between an individual and their environment requires a novel response is regarded as a stress situation (KOPP, 2003). How the individual sees these situations (joyous, pleasant or unpleasant, upsetting) depends on the individual's evaluation. In difficult, and upsetting situations an emotional, notional, and physiological condition develops, which urges the individual to terminate or reduce this situation (MARGITICS AND PAUWLIK, 2006).

According to the psychoanalytical approach (Freud, 1986) coping means "those manoeuvres of the ego that it uses to manage threats from the external world" (OLÁH, 2005, p. 53). In the personality trait theories, coping appears as a stable, lasting characteristic of the personality, suggesting that the given reactions to stress depend on the environment to a small degree only (BYRNE, 1964). In his research KROHNE (1993) draws attention to the fact that personality traits most often regulate coping as a response to the environment. Much later OLÁH (2005) concluded that coping mechanisms are components of personality traits, habits used by the individual in stress situations. According to Lazarus's transactional theory of stress and coping (1966) coping is a kind of behaviour regulator which moderates interactions between the individual and their environment in an inadequate (upsetting, disturbing) situation. In this process cognitive evaluation plays an important role, i.e., response does not derive from emotions, instead, emotion itself is a result of cognitive evaluation as are coping strategies (OLÁH, 2005).

According to the stress, appraisal and emotion transactional model (LAZARUS & FOLKMAN, 1984), the most widely used model in sport, coping strategies are ways of managing problems or situations. NICHOLLS & POLMAN (2007a) suggest that an individual should continuously evaluate transactions in connections with their environment. NICHOLLS ET AL. (2007) found that diverse coping strategies such as crying or even alcohol and drug use are used in sport (KOWALSKI AND CROCKER, 2001).

There are several different classifications in the literature to describe coping strategies (FOLKMAN AND LAZARUS, 1980; ALDWIN AND REVENSON, 1987; SCHWARZER AND SCHWARZER, 1996). The problem-focussed type comprises activities targeting analysis and then solution while the emotion-focussed type covers efforts to ease the tension generated in the stress situation, minimise or avert the problem (FOLKMAN AND LAZARUS, 1980; LÁZÁR AND FOLKMAN, 1984; KOPP AND SKRABSKI, 1992; RÓZSA ET AL., 2008). Coping focusing on emotions focuses on managing emotions. Within these categories a lot of coping strategies are used (WETHINGTON AND KESSLER, 1991). Some of these can be, among other things, avoiding problems, and alcohol or drug use (CARVER ET AL., 1989). Some sportspeople turn to religion for support or seek assistance from other people.

The appraisal process has two forms: primary and secondary appraisal. Primary appraisal occurs when individuals encounter noxious life events, in other words, potential stressors and decide whether the particular event has a positive or negative meaning to them. In the case of a negative meaning it is followed by reflection or re-thinking of the event followed by the decision about whether the given negative event (1) represents a momentary danger or (2) a lasting threat, which potentially threatens the future, too, or (3) should be considered a challenge. Primary appraisal is usually not a conscious process.

In the process of secondary appraisal an individual takes stock of their resources, the controllability of the situation and the potential responses and ways of coping that they can use to manage the situation. Inadequacy of the psychological coping resources leads to stress.

The key to health can be efficient coping with stress, the efficient functioning of the personality components and the interrelation of the dimensions of health and illness.

Examination of the use of coping strategies can be very useful among sports people since they are exposed to diverse loads. On one side there are the coach's expectations, which can concern the sportsperson's performance or their behaviour within or outside their group, and all this can represent great pressure. As a person competes at a higher level, the number and nature of expectations can increase. Too much load can lead to a disturbance in the functioning of the person's nervous system, potentially making decision-making difficult, too, and can eventually result in a deterioration of the person's performance (FREDERICK AND RYAN, 1993, as cited in

KYPRIANOU ET AL., 2009). All this can have an effect on the individual's mental condition, too, even potentially causing anxiety, depression, eating disorder or other mental disorders.

In this study I examined diverse coping strategies among young adults. I wanted to find an answer to the question what kind of coping strategies occur among individuals doing competitive and leisure-time sport on the one hand, and non-athlete individuals on the other. My premise was that use of coping strategies can be greatly affected by doing sport and the intensity of that sport. I also assumed differences between male and female sportspeople.

In my study I also investigated the question how smoking and alcohol use as negative ways of coping effect intrapersonal ways of coping.

MATERIALS AND METHODS

The basis for my study was my own on-line survey. Sample size was 813 people (N=813), of whom 442 (45.6 %) were females and 371 (54.4 %) males. Based on aggregate data, 41.94% of the sample regarded themselves as individuals doing competitive sports, 35.91% leisure-time sportspeople, 22.14 referred to themselves as non-athlete individuals.

17.2% of the respondents were under 18 years of age, 22.0% were between 18 and, 29.9% between 21 and 23, 16.7% between 24 and 29, and 14.1% were 30 and over. 48.2 % of the respondents were students, 43.6% were in full-time employment with 8.2% employed part time or receiving some kind of provision. 25.5% of the sample had basic level, 52.0% intermediate level, and 22.5% had higher level qualifications.

78.1% of the respondents judged their income to be average, 4.2%-a thought it was below average, and 17.5% deemed their financial situation above average.

Taking the questionnaire took place on the Internet and by personally contacting various schools and sports organisations and sports clubs. Completion of the complete questionnaire took about 12-14 minutes. The full questionnaire comprises sociodemographic variables on the one hand, and eight standardised and reliable measuring tools on the other. In this study I wanted to find an answer to the question whether, in terms of coping strategies, the beneficial effect of sport appears in individuals pursuing competitive and leisure-time sports compared with non-athete individuals. I also investigated whether smoking and alcohol use are present as negative coping strategies among respondents, and if so, in what form.

To study conflict-solving strategies I used the shortened, FOLKMAN-LAZARUS (1980) (Ways of coping) (KOPP AND SKRABSKI, 1992; RÓZSA ET AL., 2008) questionnaire also used in epidemiological surveys (Hungarostudy 1988, 1995, 2002). It measures the applicability of the Conflict-Solving Questionnaire to various difficult life situations and the stability of coping strategies. Factor analysis of the 16 items of the Conflict-Solving Questionnaire revealed the following four dimensions: Cognitive Restructuring, Tension Reduction, Problem Analysis, and Passive Coping.

In connection with a life situation that the respondents deemed especially difficult they used a four-point scale to show whether the ways of coping described in the list were typical of their behaviours in the weeks that followed the event and if so, to what extent.

I also assessed the smoking and alcohol use habits of the sample.

Statistical analysis of the data was done using SPSS 25.0 statistical software. In addition to descriptive statistics, I also used the Kolmogorov-Smirnov test to check normality and checked my hypotheses using nonparametric tests (Kruskal-Wallis, and Mann-Whitney). I considered the results of the statistical tests significant at $p<0,05$.

RESULTS

This study focuses on how conflict-solving strategies work among competitive and leisure-time sportspeople as well as non-athlete individuals.

In terms of the entire sample, Table 1 shows minimum and maximum values of the four factors of conflict-solving strategies as well as means per factor and distribution.

Table 1: mean values of coping strategies in the entire sample

	N	Min.	Max.	Mean	St.dev.
Cognitive restructuring	813	0,00	5,00	2,61	0,50
Tension reduction	813	0,00	4,00	1,80	0,63
Problem-analysis	813	0,00	4,00	2,81	0,46
Passive coping	813	0,00	4,00	1,62	0,65

Source: own resource

Pearson's correlation table (Table 2) represents the strength of the relationship among the variables. Cognitive restructuring shows a mild correlation with tension reduction, medium with problem analysis and a weak correlation with passive coping.

Tension reduction shows a weak correlation with problem analysis and a medium one with passive coping. The correlation is also weak between problem-analysis and passive coping.

Table 2: pearson's correlation values of coping strategies

Pearson's correlation	Cognitive restructuring	Tension reduction	Problem analysis	Passive coping
Cognitive restructuring	1	0,077*	0,380**	0,160**
Tension reduction		1	0,175**	0,334**
Problem analysis			1	0,118**
Passive coping				1

* :Correlation is significant at 0.05

** :Correlation is significant at 0.01

Source: own resource

My first hypothesis was that there was a difference between the three examined groups in terms of coping strategies.

None of the examined variables having showed normal distribution ((Kolmogorov-Smirnov, $p<0.05$ in each case), I tested this hypothesis using the Kruskal-Wallis H test. The three examined groups showed a significant difference in the cognitive restructuring coping mode ($p=0.007$) (Table 3).

Table 3: differences between competitive and leisure-time sportspeople and non-athletes

	Cognitive restructur-ing	Tension reduction	Problem analysis	Passive coping
Kruskal-Wallis H	9,91	3,58	1,32	2,02
df	2	2	2	2
Signifikan-cia	0,007	0,167	0,517	0,365

Source: own resource

The differences are also supported by Table 4, which shows the mean values and distributions of the coping strategies among competitive and leisure-time sportspeople and non-athlete individuals. As can be seen in the table, the mean values of the competitive and leisure-time sports people differ significantly in terms of the cognitive restructuring coping mode from those of non-athlete individuals. Furthermore, in terms of tension-reduction and problem analysis there was a mild difference in favour of the sportspeople while in terms of passive coping non-athletes showed higher values (Table 4.).

Table 4: mean value and deviation of coping strategies among competitive, leisure athlete and non-athletes

	Competitive sportspeople (N=341)		Leisure-time sportspeople (N=292)		Non-athlete indi-viduals (N=180)	
	Mean	St.dev.	Mean	St.dev.	Mean	St.dev.
Cognitive restructur-ing	2,64	0,47	2,64	0,49	2,48	0,54
Tension reduction	1,77	0,62	1,79	0,62	1,89	0,67
Problem analysis	2,82	0,46	2,83	0,40	2,76	0,53
Passive coping	1,59	0,65	1,64	0,62	1,65	0,72

Source: Own resource

My second hypothesis assumed that there was a difference between the genders in terms of coping strategies. I analysed my hypothesis using the Mann-Whitney Test and was able to show that female members of the sample had a significantly higher rate of passive coping ($p=0.017$) than male members. I also found a significant difference ($p<0.001$) in terms of problem-analysis as well (Table 5).

Table 5: difference(s) between females and males in terms of coping strategies

	Cognitive restructuring	Tension reduction	Problem analysis	Passive coping
Mann-Whitney	77637,50	81279,00	68520,50	74347,50
Wilcoxon W	175540,50	150285,00	137526,50	143353,50
Z	-1,31	-0,22	-4,10	-2,40
Signifikancia	0,190	0,828	<0,001	0,017

Source: Own resource

The differences between the genders are shown in Table 6, too. It was males that showed higher mean values in terms of cognitive restructuring and tension reduction while females showed high mean values in terms of problem analysis and passive coping.

Table 6: mean values across genders and distributions in terms of coping strategies table

		Cognitive restructur-ing	Tension reduction	Problem analysis	Passive coping
Female N=442	Mean	2,58	1,79	2,87	1,66
	St.dev.	0,50	0,59	0,43	0,63
Male N=371	Mean	2,64	1,82	2,73	1,58
	St.dev.	0,49	0,68	0,48	0,68

Source: Own resource

I also asked members of the measured sample questions about smoking and alcohol use. 79.3% of respondents (645 people) thought of themselves as non-smokers, 7.1% (58 people) said they smoked occasionally (once or twice a month) and 13.5% (17 people) thought of themselves as regular smokers. Table 7 reveals a clear protective role of sport against smoking. 83. 3% of competitive sportspeople do not smoke at all, while leisure-time ones show a lower percentage (79.8% of them are non-smokers), and this trend continues among non-athletes: 71.1% of them are non-smokers.

Table 7: smoking habits among competitive and leisure-time sportspeople and non-athlete individuals

	Non-smokers	Smoked occasionally	Regular smokers
Competitive sportspeople (N=341)	284	25	32
	83,3%	7,3%	9,4%
Leisure-time sportspeople (N=292)	233	16	43
	79,8%	5,5%	14,7%
Non-athlete individuals (N=180)	128	17	35
	71,1%	9,4%	19,4%
Total (N)	645	58	110
Total %	79,3%	7,1%	13,5%

Source: Own resource

According to my third hypothesis a difference could be assumed among smoking groups in terms of coping strategies. I analysed the hypothesis using the Kruskal-Wallis H test and the results showed that there was a significant difference in terms of tension reduction (Table 8).

Table 8: coping strategies in terms of smoking habits

	Cognitive restructuring	Tension reduction	Problem analysis	Passive coping
Kruskal-Wallis H	0,567	45,350	0,378	2,02
df	2	2	2	2
Signifikancia	0,753	0,000	0,828	0,365

Source: Own resource

The differences are also borne out by the table below, which shows that mean values differ significantly only in terms of tension reduction. Smokers showed significantly higher means compared with non-smokers (Table 9).

Table 9: mean values and distribution of coping strategies in terms of smoking habits

N		Cognitive restructuring	Tension reduction	Problem analysis	Passive coping
Non-smokers (N=645)	Mean	2,60	1,72	2,81	1,62
	St.dev.	0,46	0,58	0,44	0,65
Smoked occasionally (N=58)	Mean	2,64	2,05	2,76	1,71
	St.dev.	0,59	0,68	0,53	0,64
Regular smokers (N=110)	Mean	2,62	2,16	2,81	1,61
	St.dev.	0,66	0,76	0,52	0,70

Source: Own resource

In terms of alcohol use 23% of respondents (187 people) said they never drank alcohol, 57.1% (464 people) drank only rarely (once a month), a further 17.8% (145 people) had alcohol once or twice a week with only 2.1% of respondents (17 people) saying that they drank alcohol on a daily basis (Table 10). As the table also shows, 82.4% of competitive sportspeople did not drink alcohol at all or only very rarely, while among leisure-time sportspeople this number was 78.5%, with 78.3% for non-athlete individuals. Across the entire sample, 80% of them rarely or never drank alcohol.

Table 10: alcohol use

	Never	Rarely	Weekly	Daily basis
Competitive sportspeople (N=341)	79	202	54	6
	23,2%	59,2%	15,8%	1,7%
Leisure-time sportspeople (N=292)	65	164	59	4
	22,2%	56,2%	20,2%	1,4%
Non-athlete individuals (N=180)	43	98	32	7
	23,9%	54,4%	17,8%	3,9%
TOTAL (N)	187	464	145	17
TOTAL %	23,0%	57,1%	17,8%	2,1%

Source: Own resource

As my fourth hypothesis, I examined the differences between the groups that did drink alcohol in terms of coping strategies. I analysed my hypothesis using the Kruskal-Wallis H test and found significant differences in tension reduction, problem-analysis and passive coping (Table 11).

Table 11: coping strategies in terms of alcohol use

	Cognitive restructuring	Tension reduction	Problem analysis	Passive coping
Kruskal-Wallis H	1,691	10,548	11,465	12,521
df	2	3	3	3
Signifikancia	0,639	0,014	0,009	0,006

Source: Own resource

As Table 12 also shows, alcohol use appears in three of the factors of coping strategies, and it was only in cognitive restructuring that mean values did not increase together with alcohol use (Table 12).

Table 12: coping strategies in terms of alcohol use

N		Cognitive restructuring	Tension reduction	Problem analysis	Passive coping
Never (N=187)	Mean	2,57	1,75	2,72	1,71
	St.dev.	0,51	0,63	0,44	0,70
Rarely	Mean	2,62	1,78	2,84	1,61
(N=464)	St.dev.	0,47	0,61	0,44	0,63
Weekly	Mean	2,63	1,88	2,82	1,50
(N=145)	St.dev.	0,55	0,63	0,48	0,62
Daily basis	Mean	2,49	2,33	2,73	1,94
(N=17)	St.dev.	0,60	0,96	0,71	0,77

Source: Own resource

DISCUSSION

The results of my examination confirmed my assumption that there were differences between competitive and leisure-time sportspeople on the one hand and non-athlete individuals on the other in terms of intrapersonal coping strategies. In difficult life situations competitive and leisure-time sportspeople prefer cognitive restructuring of all the measured coping strategies.

My assumption that there were differences between the genders, too, in terms of coping strategies was also confirmed. The female members of the sample showed a significant difference compared with the male members in terms of passive coping and problem analysis.

In this study I also found an answer to the question how smoking and alcohol use appeared as a negative way of coping in competitive and leisure-time sportspeople and non-athlete individuals. The results led us to conclude that smoking has a tension reducing function in the coping process. Its protective role against smoking in sport also appeared, which contradicts previous research (Peretti-Watel, 2002).

In terms of sporting habits and the frequency of alcohol consumption I found that competitive and leisure-time sportspeople and non-athlete individuals consume alcohol with similar frequency; almost the highest percentage belongs to competitive sportspeople who never or just rarely drink alcohol, a finding which, again, runs counter to previous studies (Grossbard et al., 2007; Veliz et al., 2015).

Frequent alcohol consumption has a tension reducing role in the coping process and is characterised by passive coping. However, moderate alcohol use is accompanied by a significant increase in problem analysing ability.

People use different ways of coping in different life situations which are often situation-specific and do not lend themselves to unambiguous generalisation. An unambiguous assessment of coping strategies is made difficult by the fact that in different life situations an individual tends to use the same coping strategy from time to time in the coping process (Schwarzer and Schwarzer, 1996). This it becomes understandable that while a particular coping strategy (e.g. praying, eating or drinking, and smoking) appear totally adaptive with reference to a given period, in a later period the used strategies are not necessarily effective.

CONCLUSION

In my research, which I conducted among competitive and leisure-time sportspeople as well as non-athlete individuals, I examined what kind of coping strategies are used in difficult situations. As a cumulative result we can conclude that competitive and leisure-time sportspeople showed significantly higher values in their use of cognitive restructuring compared with non-athlete individuals. Cross-gender examination revealed that females possess significantly more passive ways of coping than males. I also found significant differences in terms of problem analysis.

In terms of psychoactive substance use I examined smoking habits and alcohol use. In terms of smoking the protective role of sport occurs. In the three examined groups the number of smokers decreased together with an increase in the intensity of sport. In the case of smokers tension reduction increases significantly, that is, smoking becomes realised as a negative coping strategy.

In the case of alcohol use I found significantly higher values for the coping strategies of tension reduction, problem analysis, and passive coping.

Obviously, sportspeople's psychoactive substance use can also be affected by factors other than sporting habits, which are, on the one hand, sport specific (nature of sport: individual versus team sport, atmosphere in the sports organisation, frequency and level of competing, etc.) and diverse psychosocial factors (stress, anxiety, depression, financial and social situation, etc.), and on the other hand, can also play a role in the use of coping strategies. The complex examination of these factors can contribute to a better understanding of the examined topic and we can arrive at a more precise answer whether sport does play a substantial role in influencing coping mechanisms and use of psychoactive substances.

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SCIENTIFIC PAPER

ECONOMIC IMPORTANCE OF THE HUNGARIAN SPORTS SECTOR IN INTERNATIONAL COMPARISON

Zsuzsa Koroknay

Clinical- and sport psychologist
University of Debrecen, Faculty of Economic Sciences,
Department of Sport Economics and Management, Debrecen

keczeli.danica@cts.hu

Abstract: Sport is one of the most dynamically developing sectors in the world. During my research, I was looking for the answer to why and how the economic aspects of sport have evolved in recent times. I examined and evaluated sports economy indicators for the global (The European Union) and territorial (Hungary) units (for the last twenty years). The need for measurability is constantly increasing nowadays. This can also be seen in the markets of the sports sector, so we can find databases that are increasingly expanding in this sector. I have analysed EUROSTAT databases - with indexing – which can provide relevant information. The research field was two economic aspects, the number of employee and trade in sporting goods. The number of employees was analysed separately by the European Union and Hungary. In the examination of trade in sporting goods The Hungarian trade in sporting goods was compared to the neighbouring European Union countries. Based on my results, I can say that the economic importance of the sports sector has increased within the European Union and Hungary as well because the number of employed people in sports and the trade in sporting goods has increased.

Keywords: *sport sector, economic importance, employment in sport, trade in sporting goods*
(JEL Classification: *L83, Z20*)

INTRODUCTION

Nowadays people have more leisure time which has resulted in the increased competition between market participants. Sport has a positional advantage in this market because people need motion and physical activity due to their biology. So, sport is one of the strongest participants in this competition. In my research, I have investigated the economic dimension of sports, during the last 20 years.

The economic importance of sport has steadily increased since the 2000s. In recent decades more and more research has appeared in connection with sporting activities (ANDREFF and SZYMANSKI, 2006); in addition, in many disciplines can be found academic research (HUMPHREYS and RUSESKI, 2008). The professionalization and growth of sport has given changes in the production, consumption, and management of sport (HOYE et al., 2018). This demonstrates that sports alone share 2.5 – 3% of world trade (ÁCS, 2015; NÁDORI and BÁTONYI, 2011; NÁDORI, 2000; SZYMANSKI, 2010). The average annual growth rate of the sports market was 7% around 2010. This means that the growth rate of the sports sector has exceeded that of GDP's (COLLIGNON and SULTAN, 2014). The expenditure of private households on sporting goods and services reached $700 billion, which is equivalent to 1% of world GDP (BÁCSNÉ BÁBA et al., 2018).

In the European Union during the past 20 years, already 2% of the gross domestic product could be attributed to the sports sector. Demand for sporting goods and services created annually about €16.5 billion (NÁDORI, 2000). In 2018 the sport-related GDP was 279.7 bn Euros, what was 2.12% of total GDP (EC, 2018). In most of the EU-27 the leisure, cultural and sporting services are in the top three sectors in terms of gross value added (BÁCSNÉ BÁBA et al., 2018). The direct effects of sport and the multiplier effect together contributed 3% of total gross value added (GVA) in the European Union. Also, it can be said that the national income elasticity of the sport sector is 1.14. This means that if the national income grows by 1%, GVA in sport will increase by 1.14% (BÁCSNÉ BÁBA et al., 2018). Reference (EC, 2012) points out that sport belongs to the major economic sector. The economic performance of sport is almost equivalent to that of agriculture, forestry and fishing (BÁCSNÉ BÁBA et al., 2018; EC, 2012). These numbers make it clear that sport is playing an important and growing role in national economies, especially when we can see that its contribution to GDP is detectable. "The GDP stands for Gross Domestic Product and represents the total monetary value of all final goods and services produced (and sold on the market) within a country during a period (typically 1 year)" (KSH, 2015; WORLDOMETERS, 2019).

Reference (WHO, 2018) summarized the percentage of GDP for health, education and sports in The European Union in 2018 (Table 1, Table 2).

TABLE 1: Averages for the European Union

Country	GDP per capita (€)	Health (GDP)	Education (GDP)	Sports (GDP)
Averages of EU	25 907	6,1%	5,0%	0,3%

Source: Own editing based on WHO (2018), 2019

According to data from all countries, the GDP per capita is 25.9 thousand euros. The percentage of health-related products and services is the highest (6.1%) in its contribution to GDP. The next is the expenditure on education with 5%. The average contribution of sport to the GDP in the EU is 0.3%. In the contribution to GDP, health (8.6%) and education (6.9%) are the largest in Denmark, but Hungary is the first (1.1%) in sports (Table 2).

These proportions can be compared among those countries which have almost the same GDP per capita as Hungary. These countries are Croatia, Poland and Latvia. The Health (GDP) is the highest in Croatia, but Hungary follows with 4.8%, ahead of the other two countries. The Education (GDP) has the highest proportion in Poland, after that Latvia, and Hungary with 4.9%. In the case of Sports (GDP), Hungary has the highest rate (1.1%) no in just among these countries, but also in the European Union.

TABLE 2: Percentage of GDP for health, education and sports in the member of the European Union

Country	GDP per capita (€)	Health	Education	Sport
Austria	36 300	8,0%	4,9%	0,3%
Belgium	34 400	7,4%	6,4%	0,4%
Bulgaria	6 000	5,0%	3,4%	0,2%
Cyprus	21 600	2,6%	6,0%	0,3%
Czech Republic	16 500	7,4%	4,6%	0,4%
Denmark	45 800	8,6%	6,9%	0,4%
United Kingdom	31 800	7,6%	4,7%	0,2%
Estonia	13 700	5,3%	5,9%	0,4%
Finland	34 800	7,2%	6,1%	0,5%
France	31 800	8,1%	5,4%	0,5%
Greece	17 100	4,9%	4,3%	0,3%
Netherlands	39 800	7,7%	5,3%	0,5%
Croatia	11 100	6,5%	4,8%	0,1%
Ireland	53 100	5,2%	3,3%	0,1%
Poland	11 200	4,6%	5,8%	0,3%
Latvia	11 000	3,7%	5,5%	0,2%
Lithuanian	12 000	5,8%	5,2%	0,2%
Luxembourg	81 700	4,8%	4,8%	0,5%
Hungary	11 300	4,8%	4,9%	1,1%
Malta	19 700	5,6%	5,4%	0,1%
Germany	34 700	7,2%	4,2%	0,2%
Italy	25 900	7,0%	3,9%	0,3%
Portugal	16 900	5,9%	4,9%	0,3%
Romania	7 700	4,0%	3,7%	0,3%
Spain	23 800	6,0%	4,0%	0,4%
Sweden	42 600	6,9%	6,6%	0,6%
Slovakia	14 600	7,4%	3,8%	0,2%
Slovenia	18 500	6,7%	5,6%	0,3%

Source: Own editing based on WHO (2018), 2019

On the other hand, the data can be compared among the neighbouring countries of Hungary (Austria, Croatia, Romania, Slovakia and Slovenia). In the rank of GDP per capita, Hungary is the third after Austria and Croatia. The Health (GDP) rates are higher than 6.5% in neighbouring countries – except for Romania with 4% and Hungary with 4.8%. In the case of Education (GDP), Hungary is the same as Austria, and only Slovenia has a higher rate of gross value added. In this comparison, it can be said too that Hungary has the highest proportion of Sports (GDP) among the neighbouring countries (Table 2).

MATERIALS AND METHODS

During my research, I used several databases. These databases were downloaded from the Eurostat system, which I revised and use to create my own database. Databases provide an all-round picture of sports employment and trade in sporting goods.

The number of employees was determined by considering gender, age and qualification between 2011 and 2017. In these classifications, I created more sub-categories based on 1-1 additional criteria. The number of employees was grouped then divided into gender: male and female. The data is presented in three age groups by age: 15-29 year, 30-64 year and over 65 years. The qualification group has three sub-categories based on the International Standard Classification of Education 2011 levels (ISCED 2011). The first sub-category is the 0-2 levels, which includes early childhood education, primary education and lower secondary education students. The second sub-category includes the 3-4 levels, which comprise upper secondary education and post-secondary non-tertiary education (e.g.: OKJ education). The third sub-category is the 5-8 levels, which includes the short-cycle tertiary education, bachelor, master, doctoral or equivalent students (ISCED-2011; 2019).

The database of trade in sporting goods contains the turnover of sports products value in Euro. Exports and imports were presented in two different group, intra-EU28 and extra-EU28. The intra-EU28 criteria means that the trading partner is a member of The European Union. The extra-EU28 criteria means that the commercial partner is not a member of The European Union. According to the description of the database (EUROSTAT, 2019), sporting goods are understood as follows: skis and ski-related equipment, skate, water sports equipment, golf, racket (tennis and badminton) equipment, balls, gymnastic, sporting and swimming equipment, fishing equipment, bicycle, parachutes, sportswear, shoes, shooting equipment.

During my research, I have done an economic analysis, from which I chose to index. The index numbers can characterize economic phenomena, consistency and results by quantitatively. The statistical index numbers are usually derived dates. The most common types of derived numbers are ratios, averages, and indices (SÁNDOR et. al, 1997). Using this method of analysis, two areas of the sports economy were examined.

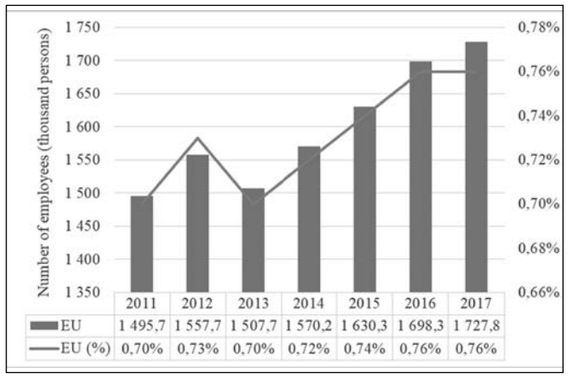
RESULTS AND DISCUSSION

In this chapter, I would like to present my results. The results are presented in the subdivision of the two examined areas, employment in the sport sector trade in sporting goods.

Employment in the sport sector

First of all, I would like to present the study of sports employment in general with the help of Figure 1 and 2. I can say that both the figure and the columns represent the number of employees, and the lines represent the sport employees' ratio of total employees.

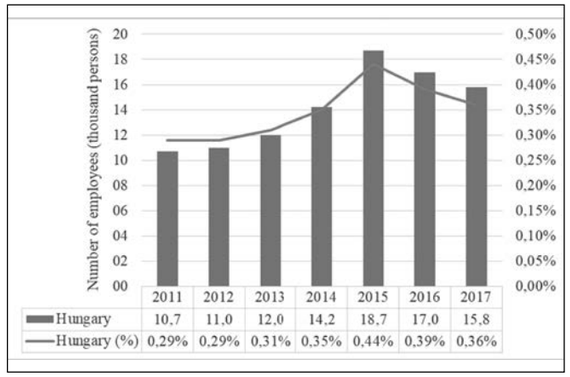
FIGURE 1: Evolution of employment between 2011 and 2017 in Europe



Source: Own editing based on Eurostat, 2019

In the European Union both the numbers of employees and the ratios have steadily increased since 2013 (Figure 1). The number of people employed was 1.5 million in 2011, which represents 0.7 percent of total employment. Compared to the base year (2011), it can be said that both examined parts were steadily increasing until 2017, although there are different changes in each year. Between 2016 and 2017 the number of employees continued to grow (+29.500 person), but the ratio of total employees did not change.

FIGURE 2: Evolution of employment between 2011 and 2017 in Hungary



Source: Own editing based on Eurostat, 2019

The number and the ratio were also steadily increasing between 2011 and 2015 in Hungary (Figure 2). In this period the number of professionals in sport increased by eight thousand, which means an increase of 0.13% in total employment. After that, the numbers and the ratio decreases by about three thousand people and 0.05%. On the one hand, it's surprising because the training offered by the sports federations and the number of participants in higher education courses is constantly increasing. On the other hand, many employees have become self-employed persons due to more favourable tax conditions, and those people were not included in the number of employment in the sports sector.

The division of the employed by gender (Figure 3) shows an average of 62-38% between men and women. During the period under investigation, the gender ratio shows the majority of men, except one year (2013) when the number of women was larger than the men.

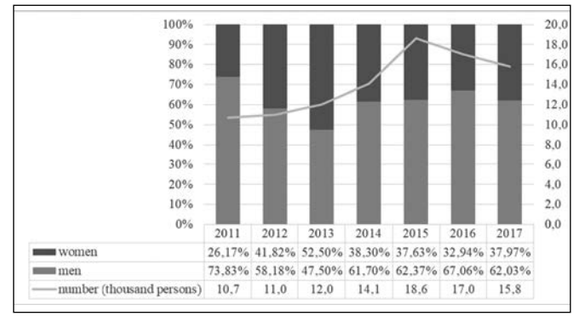


FIGURE 3: Division of Hungarian sports employees by gender
Source: Own editing based on Eurostat, 2019

Table 3 shows that in the total of Hungarian sport employees a considerable number fall into the 30-64 age group. However, it can be also seen that there is not data for the over 65s or the 15-29 age group in 2011-2012.

TABLE 3: Division of Hungarian sports employees by age group

Year/Age group	15-29	30-64	65-
2011	-	8,5	-
2012	-	8,4	-
2013	3,8	7,8	-
2014	4,7	9,2	-
2015	5,9	12,7	-
2016	6	10,8	-
2017	5,7	9,8	-

Source: Own editing based on Eurostat, 2019

TABLE 4: Division of Hungarian sports employees by qualification

Year/ ISCED11 levels	0-2 levels	3-4 levels	5-8 levels
2011	-	6,7	2,8
2012	-	6,4	3,9
2013	-	6,9	4,7
2014	-	7,5	6,4
2015	-	10,7	7,7
2016	-	9,2	6,9
2017	-	9,5	5

Source: Own editing based on Eurostat, 2019

Table 4 shows that the data grouped by the qualification of the employees. According to the data, the majority of the employees have a qualification level of 3-4 based on ISCED11. It is also noticeable that between 2011 and 2015, the number of those with levels 5-8 increased more than those with lower levels. This is a positive thing, because the number of employees who have higher qualifications increased in the Hungarian sport sector, so it can be assumed that those people have higher competence.

Trade-in sporting goods

In this chapter, the Hungarian trade in sporting goods is compared to the neighbouring EU countries between 2005 and 2014 (Table 5, Table 6).

TABLE 5: Export of sporting goods compared to neighbouring countries

Year	HR	HU	AT	RO	SI	SK	RS
2005	57%	100%	849%	254%	186%	78%	4%
2006	62%	100%	745%	227%	158%	74%	9%
2007	51%	100%	578%	239%	153%	73%	11%
2008	92%	100%	565%	243%	182%	90%	9%
2009	45%	100%	623%	248%	142%	102%	8%
2010	78%	100%	452%	181%	82%	75%	7%
2011	54%	100%	412%	181%	73%	67%	7%
2012	82%	100%	376%	165%	71%	71%	12%
2013	29%	100%	352%	155%	63%	64%	11%
2014	34%	100%	385%	167%	53%	75%	9%

Source: Own editing based on Eurostat, 2019

Table 5 shows the evolution of Hungarian exports in sporting goods between 2005 and 2014 in comparison to neighbouring countries. The benchmark was the annual export value of Hungary in thousands of euros. The base ratios for the other countries were calculated relative to the Hungarian value. It can be seen that the proportions of Croatia, Slovakia (except 2009) and Serbia were not 100%, which means that those countries export less sporting goods than Hungary. In the case of Austria, the export value decreased from 8.5 multiple to 3.9 multiple. This is favourable for Hungary, because the export value of Austria increased in the same way as Hungary's, but the decrease in ratio shows the dynamic development of Hungary. In summary, therefore, it can be said that the Hungarian export activities in sporting goods constantly improved during the period researched.

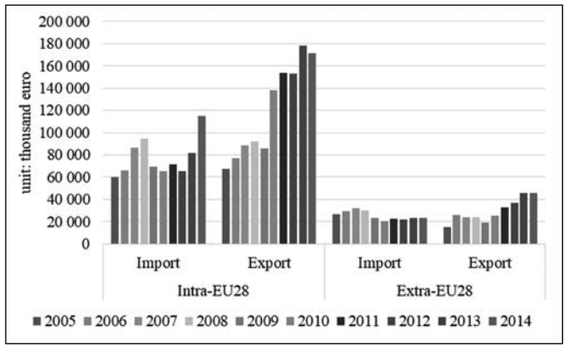
The evolution of Hungarian import in sporting goods (Table 6) is favourable compared to neighbouring countries. Serbia is the only one who constantly imports less than our country, and all the import a higher amount than Hungary. Compared to Austria, the figures for the beginning and the end of the period have decreased proportionately although the values have continued to increase. The total value of import in sporting goods has increased by about 60% under the research period in the case of Hungary.

TABLE 6: Import of sporting goods compared to neighbouring countries

Year	HR	HU	AT	RO	SI	SK	RS
2005	250%	100%	700%	69%	110%	72%	25%
2006	214%	100%	673%	80%	119%	84%	26%
2007	180%	100%	493%	89%	109%	67%	33%
2008	230%	100%	510%	120%	130%	81%	39%
2009	138%	100%	701%	105%	115%	120%	41%
2010	154%	100%	843%	104%	113%	122%	37%
2011	115%	100%	841%	98%	119%	128%	36%
2012	234%	100%	892%	111%	119%	150%	42%
2013	197%	100%	815%	93%	104%	138%	33%
2014	137%	100%	660%	80%	80%	102%	27%

Source: Own editing based on Eurostat, 2019

FIGURE 4: Hungarian trade in sporting goods by partner



Source: Own editing based on Eurostat, 2019

The exports and imports were presented in two different groups, intra-EU28 and extra-EU28 (Figure 4). The Intra-EU28 criteria shows how our trade value evolved with the members of the European Union. During the research period, exports were much more dominant than imports in Hungary. The export value was more than 120 million euro from 2010 by Intra-EU28. Imports increased until the economic crisis and after that they decreased by 25 million euro. 2014 was the first time when the Hungarian import value achieved higher value than in 2008. The Extra-EU28 criteria shows how our trade value evolved with the non-members of the European Union. During the first half of the research period (between 2005 and 2009) it can be observed that the importation was determinative. After 2010 the exportation became determinative in trade with non-members of EU.

In summary, it can be said (Figure 4) that the importation and the exportation are both more significant in trade with the members of the EU than with the non-members of the EU.

CONCLUSION

In my research, I examined the sports sector in a global context. When I refer to the global dimension, I mean the European Union, for which I did an economic analysis of sports employment and the trade in sporting goods.

The total number of sports employees in the EU increased not only in value but also in proportion to the total employment, which was 0.76% in 2017. It can be stated that Hungarian employment in sport has increased by eight thousand from 2011 to 2015, which meant 0.15% growth in proportion to total employment. After that a decrease can be seen by three thousand persons in Figure 2. This is a little surprise, because training is supported by the national sports federations. On the other hand, the tax conditions changed and as a consequence, persons who were previously employees have now become self-employed persons.

The division of Hungarian sports employees by gender (Figure 3) shows an average of 62-38%: men and women respectively. Based on the division by age group the majority of people are in the 30-60 year age group. Based on the division by qualification most people have a level 3-4 education (based on ISCED 11). But it is also positive that the number of those who have a level 5-8 education increased from 2011 to 2015 in the Hungarian sport employment. As the results show, there are more employees with a higher education employed in sport which may mean higher competence and greater development opportunities.

The other research field was the trade in sporting goods. A comparative analysis of trade between Hungary and neighbouring countries was presented/made in this study. In the case of exportation (Table 5), Hungary is the third in rank after Austria and Romania. Those countries export more sporting goods than Hungary. The Hungarian export activity dynamically improved in comparison with the export value of Austria. In the case of importation (Table 6), Hungary is located in a favourable situation. Serbia is the only one who permanently imports fewer sporting goods to their own country and all the others import to a higher value than ours. The total value of imported sporting goods to Hungary increased by almost 60% between 2005 and 2014.

The Hungarian trade in sporting goods was introduced by partner. Figure 4 shows that Hungary has a closer partnership with the members of the European Union. But Hungary has a less significant but not negligible partnership with the non-members of the European Union. The Hungarian exportation of sporting goods more significant than importation, which is a favourable position for Hungary.

In conclusion, sport is becoming a growing industry and its economic importance is continuously increasing in the European Union and Hungary too.

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SCIENTIFIC PAPER

CHARACTERISTICS OF PHYSICAL ACTIVITY AT THE UNIVERSITY OF DEBRECEN

Zoltán Szerdahelyi

University of Debrecen Faculty of Economics and Business
4032 Debrecen, Böszörményi út 138.

szerdahelyi.zoltan@ped.unideb.hu

Abstract: The assessment of physical activity is a much-researched field. Physical inactivity has negative consequences. In the development of diseases, a key risk factor is insufficient exercise. Emphasizing the relation between physical activity and health is a constantly discussed matter. UD-FCSNE students will play a key role in educating children for a healthy lifestyle. They will become teachers and specialists. Mapping students' motives concerning physical activity, we can see the order of motive factors and the factors influencing the different age groups. The majority of students exercise less than 30 minutes per day. Most of them do leisure sporting. To increase physical activity we must provide leisure sporting facilities, based on the population's needs. Maintaining and increasing fitness are chief motivational factors, unlike expectations and competition. The order of motives is significantly different. These differences occurred in five categories. There is a difference in physical activity between full and part-time students.

Keywords: *healthy way of life, leisure sporting, physical activity, university students*
(JEL Classification: *Z2*)

INTRODUCTION

PHYSICAL inactivity is a serious problem in many countries of the world, including Hungary. According to various statements, approximately 20% of the population exercises regularly. According to the studies of ÁCS et al. (ÁCS, 2011), 53% of the population do not exercise at all, and 24% of them carry out physical activity 1-3 times a month, so 77% is defined not to exercise enough. The work mentioned above (ÁCS, 2011) states, based on data from the National Health Insurance Fund (now OEP, i.e. National Health Insurance Fund Manager), that the diseases and complications due to physical inactivity cause annually an average of 9.1 billion HUF additional cost to OEP (ÁCS, 2010) through the practitioners. These results were also supported by recent research. In my research with students from the Faculty of Child and Special Needs Education at the University of Debrecen (UD-FCSNE), I wanted to examine the components and motivational background of regular exercise. With my theoretical and practical work, I would like to facilitate the widespread distribution of the elements of healthy lifestyle that are related to physical activity at both local and national level.

The change (increase/decrease) in physical activity is combined with economic effects. In addition, these effects show a different character for different age groups. Research into physical activity has gained a new impetus over the past decade. The number of research papers in the matter has grown in the fields of social and natural science alike. Table 1 gives a possible system for scientific papers. In terms of my research, I consider the economic, medical as well as the sports and health sociological approaches to be important.

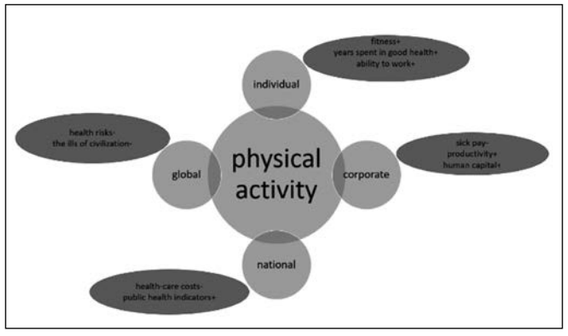
Table 1
Scientific works dealing with the effects of physical activity

Physical activity		
Economic approach	Health approach	Sports/Health-sociologic approach
Grossmann, 1972	Pál et al, 2005	Ewles – Simnett, 1999
Katzmarzyk, 2000	Ádány, 2012	Pikó, 2002
Gratton – Taylor, 2002	Soós et al, 2009	Bodnár, 2010
Chenoweth, 2005	Szmodis et al, 2014	Gál et al, 2012
Downward et al, 2009	Kopkáné et al, 2015	Földesiné, 2010
Ács et al, 2012	Apor, 2011	Kovács, 2013
Paár, 2013	Lampek – Kivés, 2014	Harcsa, 2014
Ács et al, 2015	Szőts et al 2004	Lampek – Kivés, 2014
Laczkó – Rétsági, 2015	Petrika, 2012	Laczkó – Rétsági, 2015
Ding et al, 2017	Apor, 2009	
Gabnai et al, 2019	Rurik, 2015	

Source: own work

The complex mechanism of physical activity can be observed in Fig. 1 below, in which we can identify multiple transfer effects. In the illustration, an ideal process is displayed: the increase in physical activity. In this case we can see a positive transfer, that is the expansion of positive effects caused by the increase in physical activity. In this context, the research of Downward et al is a guideline. A positive change causes the individual's health and general well-being to improve. It also preserves their physical/mental health in the long term.

Fig. 1 The complex mechanism of physical activity



Source: own works, based on Ács et al. (2015)

THE CONCEPT OF HEALTH

Many interpretations of the concept of health have been seen. Back in the middle of the 20th century, health was stated not only to be a lack of disease. It was also a state of physical-psychological-social well-being. In addition to the physical dimension, mental-social-spiritual dimensions also play a role. Functional approaches to health have emerged, which were developed into a system by Füzesi et al. The key to a functional approach is the ability of an individual to carry out various activities in the context of their social involvement. The topic of health also includes the so-called coherence theory, which was discussed by co-authors Kopp-Bugán, among others. The feeling of coherence is a state of equilibrium in which the individual is fully consistent with themselves and their environment. Physical activity can contribute to the establishment of this state.

A common denominator of the numerous interpretations is that exercising contributes to preserving health. István Bábosik deals with the economic dimension, stating: "Regular exercising is the primary and yet the cheapest safeguard of health" (BÁBOSIK, 2004).

THE ROLE OF PHYSICAL ACTIVITY

In the wake of co-authors Lampek-Kivés, I can say that physical activity has a health-restoration/rehabilitation and health-preservation/ preventive role. Another benefit is the restoration/establishment/retention of long-term work ability, which can be linked to health capital theories. Grossmann's theory is that the individual takes an active part in the development and consumption of their health capital. The individual invests and wastes. These investments may be recoverable, for example in terms of work, income and quality leisure time. Long-term decisions must be made, the effect of which is extended in time and the outcome is uncertain. The point of these decisions is: how much health improvement does the individual want to obtain from the proportion of material resources available to them.

My finding regarding work ability is already related to the corporate level, as the company's dominant resource is human capital. The health of those people is essential in terms of productivity and the number of sick leave days. Bleyer-Saliterer has systemized the positive effects of physical activity from the perspective of employers and employees. Some negative factors, such as the number of days on sick leave/the likelihood of developing chronic diseases/the tendency to have infarction/fear-depression/ probability of locomotor system diseases decrease. Performance/mood/concentration/stress resistance/self-assessment/well-being improve. In addition to physical development, personality development (co-operation, fair play, the ability to deal with failure and success, problem solving, decision making, perseverance) is also of paramount importance. These capabilities also play a decisive role in maintaining and strengthening work positions.

The improving health indicators have an impact on the national economy as a whole and can contribute to a reduction in health expenditure. Quoting Ács et al, I can state that the expenses of the National Health Insurance fund management could be reduced by more than 9 billion forints per year, by a 10% increase in physical activity.

Recently, COI (cost of illness) research has been promoted to quantify the burden of inactivity. Katzmarzyk et al established a consistent relative risk ratio, based on the link between risk of diseases and increase in inactivity. The advantages and disadvantages of research in this direction have been summarised by Gabnai et al. The works quoted are examining the costs of inactivity from a similar perspective. Such representations are that of the viewpoints of households, the corporate sector, the health system and the whole of society.

Increasing activity is not only a domestic goal. It is often read/heard that the global alarm should be sounded/heard more strongly because the negative consequences of inactivity occur globally. We face global civilisation challenges (SOÓS et al.: Homo sedens type of man/lifestyle, unhealthy diets, use of smart appliances). Physical activity can be one of the greatest weapons in our hands in this struggle.

Of course, before the development and introduction of measures to increase physical activity, the mapping of the motives of the different age groups related to sports activities should be carried out. To do so, the appropriate instrument according to Frederick and Ryan, it is possible to use Pelletier's questionnaire on physical activity and leisure time. This work divides the individual's motivational background into eight segments. We have a continuously expanding literature on secondary research. We also have international and domestic

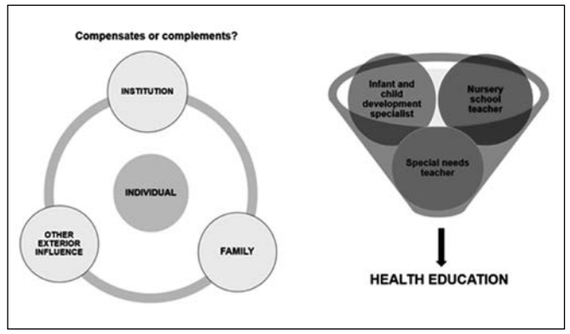
reports that provide a good basis for comparison. Ainsworth draws attention to an important methodological question. The results of subjective methods (questionnaire, activity log, observations) that can be used more easily and on a larger sample, may not always be supplemented by the quantifiable results of objective methods (accelerometer, Holter test, laboratory tests).

According to Eurobarometer data, Hungarians are not prominent in the field of sports and physical activity. In accordance with the EU trend, in Hungary the proportion of those exercising daily has declined and that of those who never exercise has grown. The answers reveal what factors form the main obstacle for Hungarian people.

The development of an individual's attitude towards healthy lifestyle takes place in a multi-factor field of force. We talk about a dynamically changing system in which family, educational institutions and other external factors influence the motivational base for exercising. Ideally, the institution should take a complementary role rather than a compensating one.

In Fig. 2. below, we can recognise external effects influencing our lives, highlighting the possible role of the Faculty of Child and Special Needs Education in shaping the individual's lifestyle.

Fig. 2. Factors that influence the individual's lifestyle



Source: own work

The subjects of my study will work in areas (nursery school teachers, infant and child development specialists or special needs teachers), where the education of children for healthy lifestyle develops and strengthens key competences. In my opinion, it is strategically important to change the attitude to physical activity among the practitioners in this field in the positive direction. This way both the individual and the whole of society will benefit. That influences the changes in quality and quantity features of human resources directly and indirectly as well. By doing this research I aim to make the implementation of the sports strategy and projects that stimulate physical activity in the UD-FCSNE more effective. This will directly result in an improvement in the physical and mental health of the students. Obviously, before the development and introduction of measures to increase physical activity, it is necessary to conduct a mapping of the motives of the different age groups relating to sports activities. We must also examine the components of physical activity.

With my research, I wanted to answer the following questions. What characteristics can be attributed to the components of the physical activity of the students studying in the different forms of training. And what are their motives to exercise?

Based on the questions above, I formulated the following hypotheses:

Hypothesis 1: The motivational background on physical activity shows significantly different features between the groups of full-time and part-time students.

Hypothesis 2: We found a significant difference in terms of the components of physical activity between the groups of full-time and part-time students.

RESEARCH

Material and method

When collecting the data, I used a questionnaire method, posing the questions of internationally validated questionnaires (PALMS, IPAQ). Online questionnaires sent via the university mailing system were randomly answered by 357 students. Number of full-time students: 187, Part-time: 170; 97% of the respondents are female.

In addition to the socio-demographic data, my 28-item questionnaire gathered information about the characteristics of the physical activity of the individual, their health status, attitudes to sporting/leisure sporting. In addition to the descriptive statistics, I performed crosstab analysis, variance analysis, and non-parametric tests during the processing.

In my study, I explored the physical activity of full-time and part-time students, as well as its components. I also analysed the motivational background of exercising (health preservation, improvement of health, change of physical appearance, building/strengthening of social relationships, performance enhancement, recreation).

RESULTS

In terms of time spent on sporting, it is a sad result that 62.5 percent of students spend less than 30 minutes per day doing sports activities. As for the from of exercising, most respondents ticked leisure sporting (68.9 percent). The high proportion of those choosing leisure sporting contradicts the data showing similar proportion of respondents who exercise less than half an hour. This means that two-thirds of the respondents either don't exercise at all or exercise insufficiently. This research also supports the hypothesis that one of the most successful ways to increase physical activity is the expansion of leisure sporting. We must achieve that considering the population's income and their motives for exercising.

I investigated the students' satisfaction with sporting facilities regarding their own residence, i.e. Hajdúböszörmény, physical education classes, and the university's extracurricular programmes. The respondents are most satisfied with PE lessons and the facilities at their own residence. They

considered the facilities provided by the faculty's hometown the least insufficient. This is confirmed by my own experiences.

In the case of motivation factors for sporting, we can observe that the preservation and improvement of physical fitness shows the highest value (72.5 percent), but more than half of the respondents considered four other categories (mental state, individual development, enjoyment, physical appearance) very important motivational factors. We can also find similarities (with a different sign) regarding the expectations of others and the competition category. Those were strongly rejected by the majority of the respondents.

A question arises. Is there a significant difference in the importance of motivational factors between the students in the two forms of training? I performed a non-parameter test to answer it. According to the results of the Mann-Whitney test, there is a statistically significant difference between the two groups in three categories. These are physical appearance, individual development and mental state. Full-time students prefer the first two motives, while part-time students the third one.

In Table 2 below, I will summarize the similarities and differences between the two groups, in the context of motivation for exercising.

Table 2:
Full-time and part-time students' motivation for exercise

Difference	Similarity
full-time: appearance/mastery	others' expectations - /competition --
part-time: psychological condition	physical condition +

Source: own work

In examining the components of physical activity, the statistically detected difference between the groups representing the two forms of training was shown in five categories. In four of these, the activity of the full-time students and, in one case, that of the part-time students is higher. The latter is primarily associated with leading a family life.

As for the two categories of sitting, the amount of sitting per weekday is explained by the routine of full-time training and the amount of sitting per weekend is most likely to have lifestyle causes.

What showed a complete match in the results of both groups, was a high level of activity related to light household chores.

It would be educating to carry out this research at faculties with different gender ratios (with either a more heterogenous or a male dominated sample).

III. DISCUSSION

The existence of differences in physical activity between full-time and part-time students is verified. Furthermore, the characteristics and causes of the differences can be explored. The Faculty must develop Physical Education and leisure sporting facilities, based on the knowledge we have gained. With respect to the experience-oriented approach, emphasis should be placed on the creation of a spiritual/mental balance, while developing locomotor skills.

In the full-time section facilities should include forms of body shaping exercise (weight control, muscle hypertrophy), introducing new methods/tools. In the part-time section the same goes for the spiritual/mental balance (relaxation techniques, yoga-based exercise, walking, hiking).

I consider it important to expand the scope of sporting facilities for part-time students, as their level of activity is lower.

I trust that after the accomplishment of a well-developed long-term strategy that takes the students' peculiarities into consideration, I can give an account of improving trends in a few years' time.

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SCIENTIFIC PAPER

PORK PRODUCTION AND CONSUMPTION ISSUES FROM THE PERSPECTIVE OF THE RELIGION AND THE WORLD'S GROWING POPULATION

[1]Viktoria Vida, [2]István Szűcs

[1]University of Debrecen, Faculty of Economics and Business, Institute of Applied Economics Sciences, Böszörményi street 138., Debrecen, Hungary 4032
[2]University of Debrecen, Faculty of Economics and Business, Institute of Applied Economics Sciences, Böszörményi street 138., Debrecen, Hungary 4032

[1]vida.viktoria@econ.unideb.hu
[2]szucs.istvan@econ.unideb.hu

Abstract: In this article we would like to present the production and consumption issues of pork meat in the world. We intend to examine the production and consumption of pork meat from the point of view of the population. The growing population of the world requires an increasing amount of food, especially animal source of protein, ie meat. We want to examine how the world can supply the growing population with food, including (pork) meat. The growing population generates ever-increasing consumption from year to year, and may not be able to satisfy it, adequately supplying the population with food, especially (pork) meat. Livestock farming, especially extensive animal husbandry, will be less able to produce sufficient quantities of meat for the growing needs.

During the analysis of food (meat) data we would like to present the difference between each continent on both the production and the consumption side. Examining the pork consumption, it should be mentioned the differences in the cultural habits, because the pork meat is the most affected in religious restrictions, regulations. The religious affiliation/identity is basically determined by the food and consumer habits, too. Due to the differences in dietary habits and religious culture, we think that the consumption of pork can be highly variable in the world and from country to country as well.

In general, we would like to answer questions about how the world (pork) meat production is going, is the meat consumed in the countries where it is produced (export – import issues), what are the factors that influence (pork) meat consumption (culture and religion impact on pork consumption, animal health issues), and is there enough (pork) meat for the world's growing population.

Keywords: *pork meat consumption, population growth, ASF*
(JEL Classification: *P46, Q18, Q56*)

INTRODUCTION

It is generally agreed that population growth, together with an increase in average per capita incomes, will result in higher pressure on natural resources and biodiversity (e.g. Foley et al., 2011). Feeding, housing and meeting the other needs of more than 9 billion people in the coming two to three decades will pressures on ecosystems worldwide. People living in cities now outnumber those living in rural areas (United Nations, 2014). Projections indicate that population growth in cities and small rural towns, along with the number of people migrating from rural to urban areas, will continue to increase (FAO, 2019B).

One of the most important challenges of the world to produce enough food for the growing population of the Earth. The food production needs to be increased not only because of the growth in population but also because of the changing dietary habits. While the agriculture tries to produce more food they have to solve several problems. Increasing need for water, soil degradation and climate change – these are only a few of the most important problems we are facing right now (Kőmíves et al., 2019).

The world's population continues to grow and over the next 40 years, agricultural production will have to increase

by some 60%. Higher food, feed and fiber demand will place an increasing pressure on land and water resources, whose availability and productivity in agriculture may themselves be under threat from climate change. The additional impact on food prices of higher demand for crops as energy feedstock is of real concern (Popovics et al., 2006, Popp et al., 2013).

However, the percentage of the world population living in urban areas grew from 33% to 54% over the same period, or from 1.01 billion to 4.2 billion in absolute terms (United Nations, 2014). It has been predicted that this number will rise to 68% by 2050 (United Nations, 2018). The global rural population is now close to 3.4 billion and is expected to rise slightly and then decline to around 3.1 billion in 2050. Urban population growth will, therefore, not mean an "emptying" of the countryside in the near future, at least at global level. At regional or local levels, however, there are already cases of rural depopulation, fuelled largely by outmigration to neighbouring, or more distant, town or cities, or to other countries (Gray and Bilsborrow, 2014; Chen et al., 2014).

Globally, urban development is a significant direct driver of land-use change, deforestation and habitat fragmentation (Elmqvist et al., eds., 2013). However, it also has numerous effects on (inter alia) lifestyles and consumption patterns, social and political attitudes, and the organization of production and supply chains, all of which can have knock-on effects on biodiversity, on a range of scales. For example, as people move to cities they tend to depend increasingly on purchased foods, often from a few supermarket chains (Macfadyen et al., 2015). They often also tend to lose ties with rural areas and rural foods, and increasingly opt for processed foods rather than fresh foods (Popkin, 2017).

The international food trade has undergone major changes both horizontally and vertically in recent decades. Concentration is growing worldwide for hypermarkets and supermarkets, discount stores, and for wholesalers also (Fenyves et al., 2017).

While supermarkets and other modern retailers can make a more diverse diet available and accessible to more people, they can also encourage the consumption of energy-dense, nutrient-poor, highly processed foods and reduce the ability of marginalized populations to purchase the food needed for a high-quality diet (Hawkes, 2008). This often has negative consequences for nutrition. Urban consumption patterns are also associated with a greater proportion of food going to waste (Parfitt, Barthel and Macnaughton, 2010).

The world's population doubled during the last 50 years, while the meat production of the world increased more than fourfold (Szőllősi et al, 2017). Poultry meat production increased the most significantly, because intensively kept broiler is seen as a way of rapidly increasing animal protein supplies for rapidly increasing urban populations (Szőllősi et al, 2014).

According to the predictions of OECD-FAO (2018), further increase of the population is expected, potentially reaching 10 billion people by 2060. It is the task of the near future to provide the world's population with proper quality food with high nutrient content that is important for maintaining a healthy life. On a worldwide scale, foods of animal origin represent an increasingly high proportion; therefore, animal husbandry and the connected processing industry have a significant role in feeding the world (Horn - Sütő 2014). Based on the related predictions, the meat production of the world is expected to increase by 32 million tons in the upcoming decade, but the change of the proportions of each meat type is going to show a different scale. According to FAO statistics, poultry meat production nearly doubled in the last two decades, while the amount of pork production increased to a lesser extent. As a result, the amount of poultry meat produced in the world in 2016 (116.8 million tons) exceeded the amount of pork produced in the same year (116.4 million tons), but the proportion of poultry and pork was different in the various examined countries and regions. In 2016, the EU 28 produced 65% more pork (23.6 million tons) than poultry (14.3 million tons) and this proportion is not expected to significantly change in the upcoming decade either (FAO, 2017).

The aims of this study are understanding the demographic changes that are likely to unfold over the coming years, as well as the challenges and opportunities that they present for achieving sustainable development and sustainable pork (meat) consumption. It is important to examine and calculate the "real" per capita consumption among those people who consume pig meat, because this new calculated data gives a closer look at the real numbers and the real consumers.

MATERIALS AND METHODS

To evaluate the growth of the world population, the urbanization we examined several forecasts: FAO, OECD, United Nations and other statistical reports and databases, we used tables, figures, diagrams to illustrate these projections.

The food sector is an important sector within the economy and no similar study has been made in the past (Fenyves et al., 2018). In this study, we did a calculation analysis to adjust the per capita consumption of pork in the world. The available data is relatively difficult to obtain and several sources had to be examined to find the appropriate, relevant data for the calculation. The required data on pork consumption were obtained on the FAOSTAT database, where the latest data are from 2018. World population data and religious affiliation were calculated based on Pew Research Center website. The calculation methodology is structured by first identifying the total amount of consumption in the world from the FAOSTAT database in kilograms, and then the world population in head. These two data gives the ratio of per capita pork consumption in the world, in kilograms for that year. After that we divided the world's population - according to Pew Research Center data - by using ratios of different religions. By dividing the world's population by religion, we add up those people who do not consume pork because of their religious affiliation, cultural differences, restrictions (Muslim, Hindu, Buddhist, Jewish people). Then we deducted this result from the world's global population. So we identified the world population that is not religiously restricted in pork consumption, they are the "real pork consumers". After that we divided the total pork consumption in the world (kilograms) with the "real pork consumers" (per capita), resulting the world corrected pork consumption indicator (kilograms / capita / year).

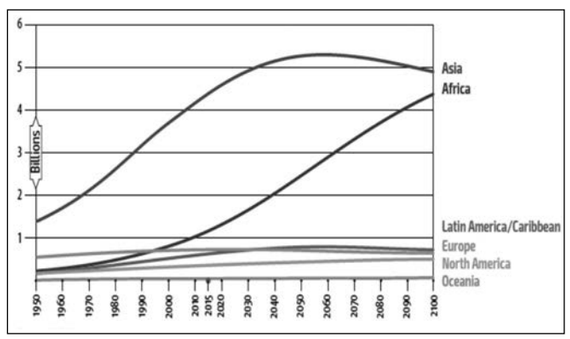
RESULTS AND DISCUSSION

Nowadays, the world population continues to grow more slowly than in the recent past. Ten years ago, the world population was growing by 1.24% per year, in 2014 it is growing by 1.18% per year, and it gives approximately an additional 83 million people annually. The world population is projected to increase by more than one billion people in 2030, reaching 8.5 billion people, and to increase further to 9.7 billion in 2050 and 11.2 billion by 2100 (UN, 2015).

The global trends shows considerable differences across and within regions and between high-income and middle- and low-income countries. Figure 1 show, while the high-income countries would reach their maximum population size by 2040, low- and middle-income countries would see only slow declines in growth over the medium and even the longer term. There are also considerable differences in population growth rates within low-income countries. Asia, the most populous continent, would reach its population peak between 2050 and 2060. East Asia is expected to see a continued and increasing deceleration of growth rates and a shrinking overall population after 2040. South Asia will continue to grow beyond 2070 and only reach its zenith sometime after that point. Growth is also expected to slow in Latin America, but more moderately, and the region will not reach its maximum population size before 2060 (FAO, 2017).

In sharp contrast, the population of Europe are expected to decrease between 2015 and 2050. Several countries are expected to see their populations decline by more than 15% by 2050, including Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Japan, Latvia, Lithuania, Republic of Moldova, Romania, Serbia, and Ukraine. Fertility in all European countries is now below the level required for full replacement of the population in the long run (around 2.1 children per woman, on average), and in the majority of cases, fertility has been below the replacement level for several decades (UN, 2015). Since 2000, the population of EU 28 has grown by around 0.5% per year (Gløersen et al., 2016).

Figure 1: World population growth by continent from 1950 to 2100



Source: FAO, 2017

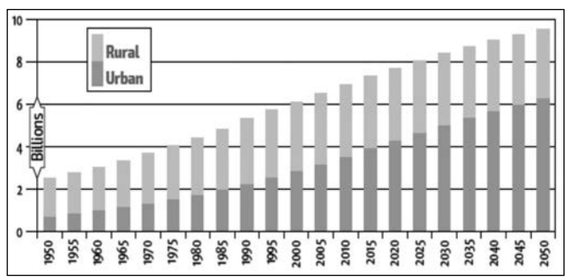
Rapid growth is projected for the Near East and North Africa region, where increases come to a halt only after 2080. The only region where the maximum population size will not be reached within this century is Africa. While the region's growth rate will continue to decelerate, its population is set to continue to expand beyond the end of the century and is expected to reach more than 2.2 billion by 2050 and more than 4 billion by 2100. The net effect across all regions will be a continuously growing global population, possibly surpassing 11.2 billion people by 2100 (FAO, 2017).

More than half of global population growth between now and 2050 is expected to occur in Africa. Africa has the highest rate of population growth among major areas, growing at a pace of 2.55% per year. The differences within regions are even more pronounced than the differences across regions. Some countries are currently projected to grow so rapidly that their populations would reach multiples of their current levels by 2050. At the top of the list of fast growing populations is Niger, with growth rates of 3.75% expected between 2015 and 2050, and 2.12% thereafter (UN, 2015).

The new projections include some notable findings at the country level. For example, within seven years, the population of India is expected to surpass that of China. Currently, the population of China is approximately 1.38 billion compared with 1.31 billion in India. By 2022, both countries are expected to have approximately 1.4 billion people. Thereafter, India's population is projected to continue growing for several decades to 1.5 billion in 2030 and 1.7 billion in 2050, while the population of China is expected to remain fairly constant until the 2030s, after which it is expected to slightly decrease.

For decades, the world's population was predominantly rural. We can see on the Figure 2 that, thirty-five years ago, more than 60 percent of all people lived in rural areas. Since then, the urban-rural balance has changed markedly, and today slightly more than half of the global population (54%) is urban. Thirty-five years from now, in 2050, more than two-thirds of all people may be living in urban areas (FAO, 2017).

Figure 2:
Growth in global urban and rural populations from 1950 to 2050



Source: FAO, 2017

Changes in agriculture, notably technical progress and the adoption of labour-saving technologies, have helped underpin increasing urbanization. At the same time, agriculture,

food and nutrition have been, and are likely to continue be, affected by the changes brought about by urbanization (FAO, 2017). Consumption of cereals and other crops will decline while consumption of vegetables, fruits, meat, dairy products and fish is expected to increase. Increasing demand for semi-processed or ready-to-eat foods will lead to further concentration in the food chain (FAO, 2011).

To sum up the most important effects of urbanization on the food industry are: changing consumer habits, increasing demand for processed foods; the increasing importance of retail chains in distribution; increasing food wastage, which is more concentrated; increasing the distance between the place where food is produced and consume; increasing packaging; people are moving away from nature; people do not want / can prepare food ingredients (e.g. peeled vegetables, etc.), they also want to buy it.

In addition to urbanization, the culture, the religion affects our food consumption too. Religious groups have independent beliefs, attitudes and rules. There are some religious restrictions that have a significant impact on food consumption. The three most significant are the Muslim, Hindu and Israeli populations. We can see on the Table 1 that, the highest proportion / number of people has the Christians, this religion hasn't got any restriction in food consumption. The second biggest number has the Muslims, and the third the Hindus. There are restrictions in Hindu, Muslim and Jewish religion. The Hindus does not consume beef meat, and there are many vegetarians among the Hindus. In Jewish and Muslim religion do not consume pork meat. The Jewish population won't be growing significantly, but the number of Muslims will increase in the future. From 2010 to 2050 the proportion of Muslims from 23% will grow to around 30%, and to 2100 it will be more than 31%, it will be as the same, like Christians.

Table 1: The number of the main religious groups

The main religious groups	Population in 2010 (thousand people)	% of world population in 2010	Projected population in 2050 (thousand people)	% of world population in 2050
Christians	2,168,330	31.4	2,918,070	31.4
Muslims	1,599,700	23.2	2,761,480	29.7
Unaffiliated	1,131,150	16.4	1,230,340	13.2
Hindus	1,032,210	15.0	1,384,360	14.9
Buddhists	487,760	7.1	486,270	5.2
Folk religions	404,690	5.9	449,140	4.8
Other religions	58,150	0.8	61,450	0.7
Jews	13,860	0.2	16,090	0.2
World total	6,895,850	100.0	9,307,190	100.0

Source: own construction based on projection of the Pew Research Center, 2015

We can conclude from Table 1 that, the proportion of Christians (31%) and Hindus (15%) will be the same in 2050, the number of Muslims will be increase (from 23% to 30%), and the proportion of another religion groups will decrease in the future.

To sum up, we can state, that the growing population in Asia and Africa with the religious Muslim, or Hindus will not be increase the pork consumption and pork production. Whereas these religious groups do not consume pork due to the restriction, pork is not affected by their growing population.

We can see in Table 2 the meat production and trade by the types of meat in 2017 and 2018.

Table 2: The world meat market (production, trade, consumption) in 2017 and 2018

PRODUCTION (million tons)	2017	2018	2019 forecast
Bovine meat	69,6	71,2	71,6
Poultry meat	122,3	124,8	128,4
Pork meat	119,8	120,5	115,6
Ovine meat	15,2	15,2	15,3
Total meat production	332,4	337,3	336,5
TRADE(million tons)			
Bovine meat	10,2	10,9	11,3
Poultry meat	13,1	13,3	13,8
Pork meat	8,2	8,4	9,1
Ovine meat	1,0	1,0	1,0
Total meat trade	32,8	33,8	35,4
Per capita meat consumption: world (kg/year)	43,9	44,0	43,4

Source: own construction based on FAO, 2019A

World meat output in 2019 is forecast to drop by 0.2% to nearly 337 million tonnes, breaking the pattern of slow but steady growth witnessed by the sector for almost two decades. The decline in global meat production fundamentally reflects the expectations of a 5% output contraction in China, along with a slight decline in anticipation of all major meat producing countries, especially the United States of America, Brazil, Mexico, India, the European Union (EU), the Russian Federation and Pakistan. World trade in meat and meat products is forecast to surpass 35 million tonnes in 2019, up 4.8% from last year. Much of the momentum is expected to stem from a 19-20% surge in overall meat imports by China, partly because of the ASF spread. Elsewhere, Japan, Mexico, the Philippines, Viet Nam and the Russian Federation are also expected to step up their meat purchases, while Saudi Arabia, Angola, Cuba and the Republic of Korea may import less. The expected expansion in world import demand is forecast

to be largely met by increased exports from Brazil, the EU, the United States of America, Thailand, India and Argentina, while limited supplies may depress meat sales by Australia, New Zealand, China and Uruguay (FAO, 2019A).

Another remarkable information that today, an average person eats 44 kilograms of meat per year, and it will reach 52 kilograms of meat per year to 2050 (FAO, 2017). When we compare consumption across different countries we see that, typically, the richer we are the more meat we eat. There are not just more people in the world, there are more people who can afford to eat meat.

We can see in the Table 3 the production, trade and consumption data of pork meat (in carcass weight equivalent). The production is projected to increase in the future (it will reach 128 million tons to 2025) but has not yet been calculated with ASF. The import and export are on the same level, around 8 million tonnes, the export has always a little higher data. The export-import level will grow to 2027 to 8.5 million tonnes. It is a very slight growth for the future.

Table 3: The world pork meat market (production, trade, consumption) in thousand tons 2017-2025

Pork meat (cwe)	2017	2018	2019	2020	2021	2022	2023	2024	2025
Production	118 554	120 708	121 854	123 150	124 400	125 644	126 730	127 758	128 807
Imports	8 120	7 963	7 921	7 972	8 035	8 085	8 116	8 183	8 282
Exports	8 295	8 140	8 098	8 149	8 212	8 262	8 293	8 359	8 459
Consumption	118 361	120 476	121 678	122 974	124 230	125 461	126 536	127 555	128 595

Source: own construction based on OECD-FAO, 2018

According to recent FAO reports global pig meat production is forecast at 115.6 million tonnes, a decline of 4.0% from 2018. The contraction principally reflects a sharp fall in China, which is expected to outweigh expansions especially in the United States of America, Brazil and the Russian Federation. Meanwhile, pig meat output in the EU is forecast to remain stable (FAO, 2019A). The biggest pork importer countries are China, Japan, Mexico, Republic of Korea, and USA. These five country takes 70% of the global import, China has only alone a huge effect of global import. China could alone realign the map of the world pork meat market. The main exporter countries are EU 28, USA, Canada, Brazil, and Mexico. These five country takes 92% of the global export, it is a very large figures. It is thoughtful that these 5 countries transact almost the whole trade of pork.

If we focusing only for pork consumption, we can conclude that is 12,3 kg per year for an average people in the world (OECD-FAO, 2019). But previously we talked about religion rules that has significantly effect for pork consumption, because Jewish, Muslims and maybe Hindus doesn't consume pork. So we corrected this per capita pork consumption FAO data, so we divided the population into religious groups, and we removed the number of Muslim and Jewish population, and divided this data (population) with the utilization of pork meat, and we get the 20.6 kg/year consumption level of pork. In the second case we corrected the number of population even with the Hindus. This two corrected data is very far from the FAO data, nearly double. This way we can get the real pork consumers, who eat a lot more pork, than we think, and the FAO statistic said. Consumption data of poultry is only 14.2 kg , so we can conclude (in this case) that pork is the most consumed meat.

In addition to the factors mentioned above, there are some sudden changes, which may transforming the pork meat consumption in the world. The outbreak of African Swine Fever (ASF) in East Asia (especially China) is having a strong impact on meat markets.

Reports by government officials, industry sources and news media suggest that around 20% of China's pig inventories had already been culled in the first few months of 2019, amid fears of ASF spreading more rapidly. In many provinces, cull rates in excess of 20% have been reported (FAO, 2019A).

To take a closer look of ASF in China, the Ministry of Agriculture announced that July's pig and sow inventory had decreased 32.2% and 31.9% from July a year ago. If we use China's inventory of 440.6 million in 2018 (Table 4) that decreased with 32.2%, we can calculate a decrease of 140 million pigs compared to a year ago. That decline is almost equal to all the pigs in Europe. We suspect that China's government estimate of 32.2% decline could be conservative. All observers' projects 50% range. There is a massive decline of pork supply in China, and it will be a huge increase in China's import. It would be huge pressure on the Chinese government to increase pork and other meat imports to hold food prices down. African Swine Fever could be a problem in other countries, because it will be observed in Mongolia, and several countries in Europe (Internet 1.).

Table 4: Numbers of pigs in the world in 2018

	Million pigs in 2018	%
China	440,60	56%
European Union	150,26	19%
United States	73,15	9%
Brazil	38,83	5%
Russia	22,94	3%
Canada	14,17	2%
South Korea	11,27	1%
Mexico	10,41	1%
Japan	9,28	1%
Other	10,00	3%
Total	780,91	100%

Source: Internet 1.

In China, official notifications had confirmed 129 ASF outbreaks and the culling of more than 1 million pigs by April 2019. In addition to culling, in an effort to keep the spread in check, the Government is creating separate, self-sufficient zones and ban the cross-regional transport of animals and products. However, the continued relevance of backyard farming and the use of food waste as animal feed make controlling the spread extremely challenging. There is a lively exchange of all sorts of pork products within the region, including sausages, cured meats and other processed pig meat products. They may all contain the ASF virus, which is highly resistant to temperature and other treatments (salting) and can persist for months or years. This means that the chances of ASF to spread far and fast are not only high, but the disease may resurface in the region even years after the initial outbreak (FAO, 2019A).

Due the ASF the newest data shows significant rise in global demand, production of EU pork meat for exports is expected to increase in the short term. The EU and the Americas are expected to increase their exports to satisfy world pork meat demand. High prices could lead to a stronger decline in EU consumption than previously anticipated. In the case of the Americas, per capita consumption will also rise (EC, 2019).

SUMMARY

According to the latest reports we can conclude, that the world's population by 2050 will reach 9.1 billion. This population growth will increase primarily in developing countries. Urbanization will continue rapidly, and it will also affect food consumption patterns. Income levels will be many times higher than they are today, more and more people can afford to buy (pork) meat. The pork meat consumption will be change significantly in the future, the reasons are in addition to population growth and urbanization will be religion issues, environmental/climate problem, healthy lifestyle, lower meat availability on the market. Feed this larger, more urban and richer population will be a big challenge of the 21st century.

These affecting factors will lead to change the consumer basket, the reason for the change in the consumption structure will vary from country to country. These consumer changes will have a major impact on food production and trade also. Changing consumption patterns especially in pork meat will lead to changes in the structure of meat production, it could lead to further consumption shifts between meat types. Poultry meat is expected to continue gaining shares in total meat consumption.

Religious rules have a significant impact on pork consumption and thus on the geographical distribution of pork meat. The reason for this is to be found in religious restrictions, because Jewish, Muslims doesn't consume pork under no circumstances. This is why we corrected in this study the per capita pork consumption FAO data, to show a real picture of pork consumption. After the calculation we get two corrected data, they are very far from the FAO per capita pork meat consumption data (12.3 kg/capita/year), nearly double. After this consumption calculation we examined the pork meat production, trade, and within the role of China. We can conclude that, China is the biggest pork producer, consumer and importer country. The effect of pork meat issues is huge, China could alone realign the world meat map.

The appearance of African Swine Fever (ASF) in China, with its impacts on production, consumption and trade, represents the most significant factor currently shaping the world meat market (FAO, 2019A). From this point of view, population growth is not the biggest challenge at the moment, but also to stop the spread of ASF. In the near future we have to count the consumption of beef and poultry will increase in China; and the prices may move upwards in all types of meat. Due to the recent outbreak of African swine fever (ASF) in Asia, there is a lot of uncertainty about the future world meat demand.

To sum up, demand is undergoing structural changes due to factors such as population growth, urbanization, religion issues, increasing per capita income, and other trends in meat consumption are to be considered, for example changing dietary patterns (vegetarians, vegans), the knowledge of the origin of meat (e.g. animal welfare) and how it has been produced (e.g. organic, environmental footprint).

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SCIENTIFIC PAPER

RESEARCH AND EDUCATION IN AGROBUSINESS IN MOSONMAGYARÓVÁR – THE 200-YEAR HISTORY

Judit Hegyi

Széchenyi István University, Faculty of Agricultural and Food Sciences,
Department of Agricultural Economics and Rural Development
Vár Sqr. 2, H-9200 Mosonmagyaróvár

hegyi.judit@sze.hu

Abstract: In 2018, the Faculty of Agricultural and Food Sciences of Széchenyi István University celebrated the bicentenary of its predecessor's foundation. Agrobusiness courses played an important role in the university's agricultural engineering program throughout this major time period. The aim of this study is to examine how the titles, the content, and the significance of the courses changed during the institution's important periods. Institutional history publications and the academic textbooks of great professors provided the basis of this research. Business administration, accounting, and agricultural estimation studies courses were already dominant in the first curricula. Later, courses concerning business and agricultural economics gained more ground and were accompanied by other fields of study: agricultural statistics, agricultural politics, agricultural history, and agricultural economics. During this 200-year period, the education of economics and other social science courses was done within the departments of agricultural economics and marketing, work organization and factory management, and social science and business operations, with the contribution of internationally renowned professors: Pál Sporzon, Richárd Suschka, Árpád Hensch, Károly Világhy. The Hungarian Royal Economics Academy (1874-1942) can be considered as the first prime of the agricultural economics education. From the 1900s onwards, the courses became more specialized, their numbers continuously grew, the disciplines expanded, and the number of departments increased. The second prime is the first decade of the 2000s, when besides the traditional agricultural programs, the institution started teaching economic agricultural engineers in its undivided 5-year training. They were the most popular agricultural engineers in the labor market due to their well-balanced knowledge in agriculture and economics, as well as their excellent leadership skills.
Having abandoned the economic agricultural engineering program, the institution currently educates, besides other agricultural majors, rural development agricultural engineers, whose skills the labor market does not know very well. The proportion of business related courses show a significant decline in the curriculum of traditional agricultural programs as well.

Keywords: *Széchenyi István University, agricultural higher education in Magyaróvár, bicentenary, agricultural engineering program, agro-economics, rural development*
(JEL Classification: *N30*)

INTRODUCTION

Following the regime change of 1989 in Hungary, within the national economy sectors, agriculture was the one that changed the most. Consequently, the evolving of the agricultural sector and the need for the reformation of agricultural education is continuously on the agenda. The international practice of agricultural training programs shows that universities and research institutes that are active in several different disciplines and have a great student body can provide competitive knowledge for its students. The agricultural higher education institute of Mosonmagyaróvár, the first such institution in Europe, operated in several forms. In accordance with the above claim, in 2016, the institute merged with Széchenyi István University, which represents a varied number of disciplines. It celebrated the bicentenary anniversary of the foundation of its predecessor as the Faculty of Agricultural and Food Sciences of the university. The history of the 200-year-old institute has been studied from many different angles by many scholars. The first comprehensive study is the work of Árpád Balás, former principal of the institute. In his book, published in 1987, Balás told the history of the first 80 years of the institute, which was in its fourth "era" at the time, by embedding it into the history of the

Hungarian higher education of agricultural studies. Partially this book, and partially Sándor Bánvárt's 1927 book provided the basis for two institutional history books: one written for the 150th anniversary of the foundation of the Private Institute by Antal Vörös, and one written for the 175th anniversary by Gyula Walleshausen. Antal Tenk finished his book, titled Dicső múltunk, for the bicentenary year, which presents 200 years of history with an emphasis on the biographies of great professors. The changes in the content and emphasis in the courses of agricultural higher education can be traced with the help of historic works. Courses related to agro-economics, as well as the materials of business administration and leadership has been present on the educational palette of the institution. In connection with the jubilee, the long time period allows for the examination of the role and contents of the research and education of agro-economics and rural development in contrast to core subjects like cultivation, livestock breeding, and other foundational courses.

MATERIAL AND METHODS

The research is based on books published for jubilees, books concerning the history of the institute, as well as academic textbooks written by significant figures of business studies. Analysis is also based on primary sources such as original curricula and course descriptions.

The structure of the paper follows the eras of the institution with special emphasis on important milestones. The following domains were developed after the general characterization of the institutional era (length of program, language of program, title of qualification, and the heads of the institute):

- what titles are given to the agro-economic and rural development courses in the curriculum
- within what kind of organizational framework does the teaching of the courses occur
- which significant professors are connected to the research and teaching of agro-economics, along with their most important academic textbooks
- the hours appointed to the examined courses in the timetable
- the proportion of agroeconomic courses compared to other courses

Based on the analysis, those time periods were highlighted that proved to be the most significant regarding the education of agroeconomic courses.

RESULTS END DISCUSSION

Magyar-Óvári Gazdasági Magántanintézet (1818-1849) – Private Institute of Economics of Magyar-Óvár

The language of the 2-year long program is Latin-German, the title of the qualification: farm officer. The head of the institute between 1818 and 1832 was Antal Wittmann, a land-steward of the estate and founding member of the institute, between 1833 and 1849 Joachim Keyle was the principal (KALMÁR and ORBÁN 2017). The private institute is funded by the revenue of the estates.

When Antal Wittman became the land-steward of Prince Albert Casimir of Saxony-Duke of Teschen's estates in 1811, he already formed the clear notion that a rationally functioning large-scale plant necessitates a highly educated leadership. He also understood that such a leadership could only be provided by organized education. Thus in 1816, only two years after his arrival to Magyaróvár, he already proposed the establishment of a higher educational institution in Magyaróvár to Albert Casimir. The educational institution, officially opening on November 10, 1818, started operating in the building of the castle. The first academic year opened with 4 teachers and 22 students (TENK, 2017).

In the beginning, the curriculum was temporary and only for internal use. The first official curriculum was published by the institute on September 1, 1820. According to the announcement, the winter semester was to start on November 1, and only the courses and weekly number of lessons of that semester were fixed. The courses did not include any related to economics, however, "the lectures of accounting were held separately in the finance offices of the estate, where the process of accounting was introduced in practice as well" (WALLESHAUSEN, 1993).

Thear Albrecht (1752-1828) laid down the foundations of livestock equipment and - management studies in his 1809 school founding work, published in Germany. He gained several followers in the same century, both in Germany and Hungary.

Császári és Királyi Gazdasági Felsőbb Tanintézet (1850-1869) – Imperial and Royal Economics Higher Education Institution

Similarly to the previous one, the length of the program is 2 years, the language of the program is German, and the title of qualification is farm officer. The heads of the institute: 1850-1861, Dr. Vilmos Henrik Pabst, principal; 1861-1884: Dr. Antal Masch, principal (KALMÁR and ORBÁN 2017).

At the end of 1849, after the events of the Hungarian Revolution of 1848, the Ministry of Landeskultur in Vienna ordered the establishment of a state-owned economics higher education institution in the territory of the Monarchy. Following several proposals, the imperial decree, signed on March 22, 1850, officiated the transfer of ownership of the institute from private to state. The new institutional code stated that the institution was directly under the purview of the ministry (TENK, 2017).

The first organizational regulation, published in 1850, only defined the curriculum of the theoretical disciplines and their weekly lesson numbers, without breaking it down into school years. Among the courses we can find ones that are presented for the first time in Óvár: national economics studies, foundations of legal studies, agricultural law, and government organization studies, which later developed into the discipline of public administration studies (WALLESHAUSEN, 1993). Three of the core subjects gained titles: in three hours a week, accounting, in four hours a week, business administration, and in 3-4 hours a week, national economics studies. Courses of legal nature were grouped with subsidiary subjects. Vencel Hecke (1824-1900) was appointed as a professor in 1857. A native of Óvár, after long vicissitudes, he enrolled in the institute in 1851. He

graduated with a scholarship in 1853 with excellent marks. As an assistant lecturer, he taught technology and silk cultivation, as a professor, however, he taught general and detailed plant cultivation, business administration, and estimation studies. A new course appeared in the 1860 curriculum: regional agricultural conditions. The lecturer, Hecke (then Hitschmann and Reitmann), describes the region's agricultural attributes (climate, soil, produces, population, farms, etc.). With this studium, "tájtermelés" enters the education scene, which we can regard as the predecessor of rural development studies, and it appears in the curriculum for the next one and half decade. (The textbook, which was also used for teaching business administration, was written by Hecke). During Pabst's (1798-1868) years as principal, he published seven academic textbooks, and the first part in the fourth volume of the Agriculture textbook is: Agrobusiness studies. (The concept of business administration replaced agrobusiness studies only in the 1880s). From 1855, István Morócz (1816-1881), László Korizmics (1816-1886), and Dániel Benkő (1799-1883) applied the Stephens Henri's The Book of the Farm to the Hungarian conditions in seven volumes. The 6th volume, titled Livestock Equipment, was published in 1868.

The Hungarian National Association of Economics supported the publication of several statistical works concerning livestock equipment through the introduction of estates such as Mágocs, Kis-Jenő, Béllye.

Magyar Királyi Gazdasági Akadémia (1874-1942) – Hungarian Royal Academy of Economics

First, the length of the program was 2 years (1874-1902), then 3 years (1902-1942). The language of the program was Hungarian-German between 1874 and 1884, then Hungarian from 1884. The title of qualification was farm officer (1874-1889), farm officer with university degree (1900-1926), engineer with university degree (1927-1930), farmer with university degree (1930-1942). The heads of the institute: between 1861-1884, Dr. Antal Masch, principal; 1884-1896, Dr. Árpád Balás, principal, 1897-1898 Viktor Thallmayer, commissioned principal; 1898-1907, Sándor Vörös, principal; 1907-1908, Kálmén Kerpely, commissioned principal; 1908-1909, Árpád Hensch, principal; 1909-1919, Imre Ujhelyi, principal; 1919-1920, Imre Rázsó, vice principal; 1920-1930, Sándor Bányárth, principal; 1930-1942, Gábor Groffits, principal (for a short period, 09.13.-10.15, 1930, Zsigmond Zalka, vice principal) (KALMÁR and ORBÁN 2017).

By the 1860s, the thorough education of professional skills became a necessary condition for the further development of Hungarian agriculture. The training attempts of the first half of the century attest to this recognition however, except for Georgikon in Keszthely and the school in Magyaróvár, an adequate institutional background did not exist. Meanwhile, agricultural education was already happening within an organized framework in Western Europe (CSISZÁR, 2012).

After the Austro-Hungarian Compromise of 1867, the Ministry of Agriculture, Industry, and Commerce started operating on March 10, 1967, and it took control of maintaining the institution in Magyaróvár in 1969. During this period, higher education institutions in Debrecen, Keszthely, and Kolozsmonostor were operating as well, but their opening and operation did not cause any particular issues for the ministry (TENK, 2017).

Since the 1890s, a growing number of people had been concerned with reforming the higher education program of agriculture. György Linhart, professor of the Academy, turned to the public and particularly to the ministry with concrete suggestions that mostly focused on the rearrangement of the institutional framework while also taking into consideration the reform of the program itself. Linhart assumed a great role in the creation of a curriculum that set higher requirements for academies (LINHART, 1900).

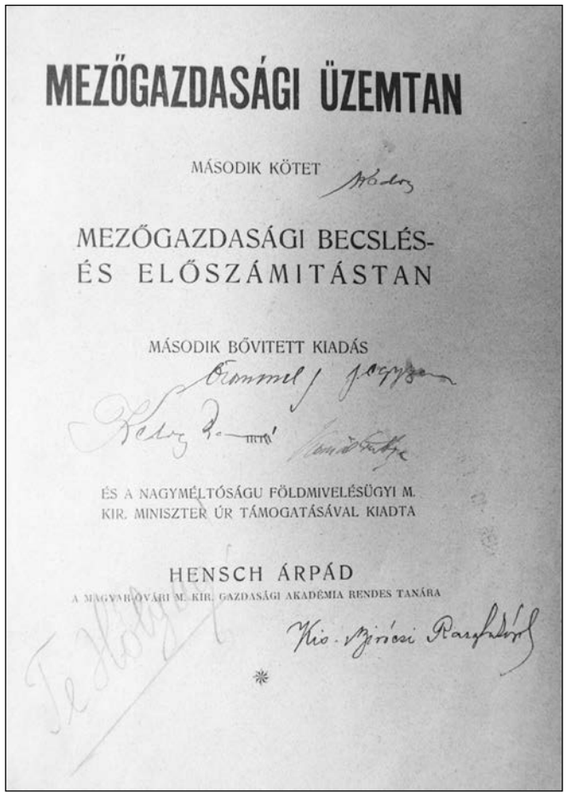
In the first curriculum of the academy, the following economic courses appeared: local economic conditions, agrobusiness studies, accounting, national economic studies, estimation studies (Photo 1.) The most important professors of this era: Pál Sporzon (1831 – 1917) (Agricultural Accounting, Economic Estimation Studies, Agricultural Business Administration), Richárd Suschka (1858 – 1910) (Basic Agricultural Accounting), Árpád Hensch (1847 – 1913) (Agricultural Business Administration I-II, Livestock Equipment and Management Studies). Their textbooks targeted a niche in this field of education. Pál Sporzon in the introduction of his 1885 book titled "Gazdasági becsléstan" (Economic Estimation Studies) mentions the following as the essential basis for successful business: business administration, as determiner of reasonable business conditions, accounting studies, as the indicator of the degree of profitability, while estimation studies as the indicator of the of return capability of income sources. He advises the careful study of these for all farmers. ÁRPÁD HENSCH emphasizes in his 1906 book, Agricultural Business Administration I-II: "virtually, the task of livestock equipment and management studies is to determine those business ratios and economic guiding principles in the equipment and management of farms that one should follow to ensure the largest constant pure revenue in the organization and leading of production. Additionally, the central idea of these principles is to achieve the most favorable ratio of production income and productions costs." (Photo 2.)

Photo 1.


A MAGYAR-ÓVÁRI
M. KIR. GAZDASÁGI AKADÉMIA 1895/96-KI **ELSŐ** FÉLÉVI
TANRENDJE.

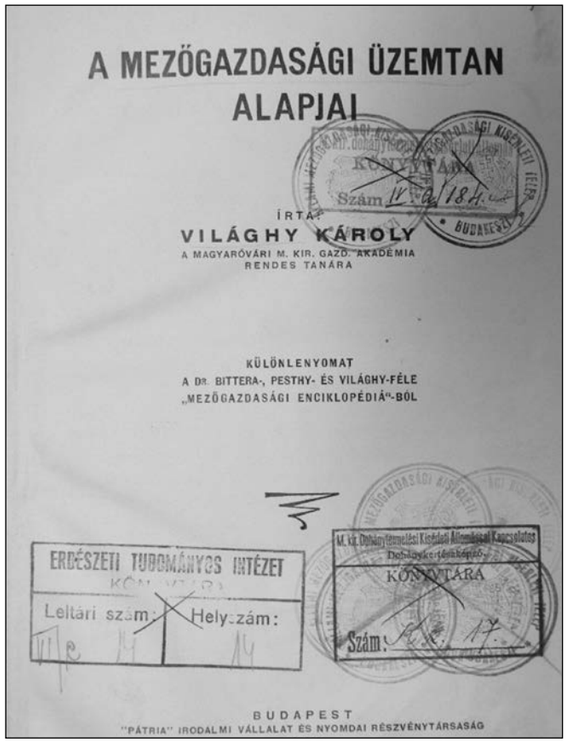
Source: the notice of the Hungarian Royal Academy of Economics, 1895

Photo 2.



Source: Hensch, Á. (1906): Mezőgazdasági üzemtan. Becslés és előszámítástan. Vitéz nyomda. Kassa.

Photo 3.



Source: Világhy K. (1930): A mezőgazdasági üzemtan alapjai. Budapest. Pátria Irodalmi Vállalat és Nyomdai Részvénytársaság.

After 8 decades of a 2-year program, a 3-year-long one replaced it from 1902. Business courses are taught in the third year, out of nine subjects, 5 are of this area of studies: business administration (livestock management, livestock equipment and management), economics (agropolitics, business statistics), business accounting, business commerce studies, business public administration studies, and legal studies. The growing significance of business studies manifests in the weekly number of lessons: out of the 22 lessons of the year, 13 are business studies related. Károly Világhy (1883-1975) was the head of the Department of Business Administration between 1922 and 1949. His almost three decades of work provided the foundations of modern business administration studies (The Basics of Business Administration Studies). The focus of his research was the problems of the business analyses of plant cultivation (Photo 3.) He prepared several lecture notes for students, one of which was concerning dairy production business administration (1930), and it discussed the physiological and economical significance of milk.

Magyar Királyi Mezőgazdasági Főiskola (1942-1945) – Hungarian Royal College of Agriculture

During this period, the length of the program was 4 years, the language of the program was Hungarian, and the title of qualification was agronomist with university degree. The head of the institute during this period (1942-45): Gábor Groffits, dean (KALMÁR and ORBÁN 2017).

The area of economics was hosted by several departments, its significance continued to grow which manifested in the diversification of departments and courses.

Department of Agricultural Business Administration:
- Agricultural Business Administration
- Methods of Business Consulting
- Agricultural Business Administration seminar

Department of Accounting
- Agricultural and Commerce Accounting
- Agricultural Statistics
- Market Research

Department of Economics
- Economics Studies
- Agricultural Politics
- Cooperative Policies

- Agricultural Social Policies

Legal courses also receive a separate department (Department of Civil and Commercial Law) (WALLESHAUSEN, 1993). Between 1949 and 1954, higher education was suspended in Óvár. The reopening was motivated by the then just evolving agricultural structures' need for versatile agronomists, in which regard Óvár had been in the front in previous years already. In the 1960s, the business education of the students occurred within the Department of Applied Business Administration (offered courses: general field work practical course and business leadership practical course), furthermore, the Department of Business Administration Studies (offered courses: agricultural business administration, agricultural statistics, and agricultural accounting and finance). Later, at the end of the 1980s, the courses were offered within the Department of Business Economics and the Department of Work Management and Business Leadership.

Pannon Agrártudományi Egyetem Mezőgazdaságtudományi Kar Mosonmagyaróvár (1989 – 1999) – Pannon University of Agriculture, Faculty of Agricultural Studies

The length of the program was 5 years, the title of qualifications: agricultural engineer with university degree, business agricultural engineer with university degree, food quality management-agricultural engineer with university degree. The heads of the institute: 1989 – 1994 Dr. Péter Horn, rector – Dr. Géza Kuroli, dean, Dr. Gyula Sáringer, rector – Dr. János Iváncsics, dean (KALMÁR and ORBÁN 2017).

Business studies were hosted within a faculty frame: the Faculty of Agro-Economics consisted of the Department of Agricultural Business and Marketing and the Department of Business Administration.

Besides these two departments, the Department of Social Sciences and the Department of Work Management and Business Leadership offered courses of economics and leadership- and management studies.

After the regime change, the new path for agricultural development was based on new foundations: on the establishment of a new operating structure and the complete reorganization of the agricultural sector. Consequently, agricultural business administration and related studies turned new operating structures, the problems of scaling, and arranging the creation of farms (individual, cooperative, company) (NÁBRÁDI et al: ed., 2008).

The importance of this period is the fact that the "business" aspect of the education of agricultural engineers evolved into a separate program. Business agricultural engineering program has been offered at the faculty since the 1995/96 school year. Almost 40% of the institute's students are enrolled in this major, which shows the significance of the program. Starting from 2000, the program had a graduating class every year until the program was discontinued.

Nyugat-Magyarországi Egyetem Mezőgazdaságtudományi Kar Mosonmagyaróvár (2000 – 2002) és Nyugat-magyarországi Egyetem Mezőgazdaság és Élelmiszertudományi Kar Mosonmagyaróvár (2002 – 2016) – University of Western-Hungary, Faculty of Agriculture (2000-2002) and University of Western-Hungary, Faculty of Agriculture and Food Sciences (2002-2016)

The length of the program: 5 years, the title of qualification: agricultural engineer with university degree. The heads of the institute: 2000 – 2002 Dr. József Koloszár, rector – Dr. Vince Ördög, dean. 2002.07.01 – 07.08 Dr. János Iváncsics, rector (deceased) – Dr.Vince Ördög, dean; 2002.07.08. – 2007 Dr. Sándor Faragó, rector – Dr. Vince Ördög, dean; 2007 – 2016.12.31. Dr. Sándor Faragó, rector – Dr. Rezső Schmidt dean.

As the number of the instructors of the field declined, the Department of Economics and other departments hosting social science courses were gradually merged together, and from 2011 onwards, these departments operated within one institute (Institute of Business Studies).

Undivided programs were discontinued in 2007, and with the introduction of the Bologna System, the divided program started in the 2005/06 school year. The Business and Rural Development undergraduate program began with a great number of students, later, the number of applicants gradually and dynamically declined (2005/06: 40 admitted students, 2015/16 10 admitted students). However, this was a nationwide trend, not only an issue of this faculty. The Rural Development graduate program operates with 3-5 students.

Széchenyi István Egyetem Mezőgazdaság- és Élelmiszertudományi Kar Mosonmagyaróvár (2016.01.01 -) – Szécheny István University, Faculty of Agriculture and Food Sciences

The length of the undergraduate program is 3 years, while the graduate program's is 2 years (later also offered as a higher-level vocational training, 2 years). The title of qualification for the undergraduate program is agricultural engineer, and for the graduate program, it is agricultural engineer with university degree. The heads of the institute: 2016.01.01 – 2016.06.30 Dr. Péter Földesi, rector – Dr. Rezső Schmidt, commissioned dean; 2016.07.01. - Dr. Péter Földesi, rector – Dr. Éva Szalka, dean.

The Department of Agro-Economics and Rural Development obtained its name in 2016 and comprises the tasks of its preceding institutes and departments. It offers business related courses and rural development programs on all levels. In 2016, the titles of the programs changed, they no longer include the term "business." Due to the "Great Curriculum Reform" starting in 2016, the number of the courses offered by the department, and their significance within agricultural programs decreased.

Based on the institutional history analyses, we can observe that the role of agricultural economics courses in the agricultural engineering program have continuously and significantly changed in the 200-year period. In the first period, professors relied on German literature. With the onset of the Hungarian-language program, disregarding smaller ups-and-downs, the program operated with great professors and adequate textbooks in Hungarian. These textbooks targeted a niche in the field, published in several editions, they were also nationally and internationally renowned.

The first golden era of agro-economics education is

the Hungarian Royal Academy of Economics (1847-1942). Starting in the 1900s, the courses became more specialized, their numbers increased, the field broadened, the number of departments grew.

The second golden era of economic education was the first decade of the 2000s, when the institution was producing business agricultural engineers with university degree in the 5-year undivided program. They were the most demanded agricultural engineers of the labor market, who possessed a well-balanced knowledge of agriculture and business, as well as outstanding leadership skills.

The introduction of divided programs does not support the successes of agricultural engineering education. The fast implementation, the carelessly constructed curricula, and the labor market's rejection of the rural management's expertise led to the quick decline of the programs. We can only hope that the future steps of the reconstruction of the agricultural higher education will facilitate the renewal and stabilization of agricultural engineering programs that also provide business education.

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