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Who spends the most money at farmers' markets?

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Abstract: Farmers' markets have been booming in recent years and are becoming an important alternative food network. They enable farmers to sell their products directly to customers and thus shorten the supply chain. Market organisers must meet the needs of both consumers and vendors by ensuring customer satisfaction while maintaining profitability for vendors. The present study identified four basic segments at farmers' markets, as follows: (1) product-oriented customers; (2) personal social responsibility-oriented customers; (3) entertainment and emotional-oriented customers; (4) alternative food-oriented customers. These segments were analysed using Structural Equation Modeling in relation to the amount of money spent on average at a farmers' market. The results indicate that most money was spent at farmers' market segments that are oriented at entertainment and emotional-oriented and product-oriented customers. This indicates that farmers' markets are no longer just a place to purchase fresh, high-quality food, but also a place that people visit for its atmosphere, for the food that can be eaten on-site, and to buy products not for direct consumption (e.g. flowers). It also proved the negative moderation effect of entertainment-oriented motivation on the amount of money spent with connection to product-orientation, which suggests that entertainment-orientated customers spend more than product-oriented customers.

Keywords: amount of money spent; entertainment-oriented customers; farmers' market; product-oriented customers; structural equation modelling

The number of farmers' markets has risen sharply in recent years (Yu et al. 2017). Their popularity is linked to customers' growing interest in the quality and composition of the foods they consume (Besik and Nagurney 2017). Consumers are increasingly dissatisfied about the fact that conventional foods can be unhealthy (Magkos et al. 2006) and more consumers have started to direct their attention to the impact that conventional foods can have on our health and the environment (Tong et al. 2012; Kutnohorská and Tomšík 2013). For consumers, farmers' markets offer the chance to purchase fresh, healthy and organic foods (Schmit and Gómez 2011; Pilař et al. 2018), which satisfies their need to protect their family's health (Pokorná et al. 2015; Polimeni et al. 2018). In addition to this, farmers' markets meet the needs of consumers who shop according to ethical, responsible and green principles (Cassia et al. 2012). These customers are interested in the protection of farmland, animal welfare, reducing food miles, carbon footprints,

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pollution, and global warming, and supporting local retailers (Chen and Scott 2014; Birch et al. 2018).

Nowadays, however, customers are not only motivated to visit farmers' markets by the quality of products (healthy, fresh and organic products) and environmental reasons, but also to satisfy their social and emotional needs (Pokorná et al. 2015; McNeill and Hale 2016). For example, they are interested in building social relationships with local farmers, having face-to-face interactions with producers, obtaining information about the products they buy, and experiencing the satisfaction of supporting local farms (Chen and Scott 2014; Oñederra-Aramendi et al. 2018). Customers also view farmers' markets as a place to meet people who share their ideals; they enjoy the atmosphere (Chen and Scott 2014) and can buy flowers or food to eat on site (Pilař et al. 2018).

Farmers' markets are a type of short food supply chain that is suitable for farmers who cannot compete in conventional markets (Demartini et al. 2017). These are the ideal channel for alternative food networks (Figueroa-Rodríguez et al. 2019), which are based on values such as local and quality food (Witzling and Shaw 2019), and help to build a mutual trust between farmers and their customers (Oñederra-Aramendi et al. 2018). Farmers' markets also offer consumers access to local products, generally at a lower cost, and allow them to learn more about the products they buy and how they are made (Polimeni et al. 2018).

Many studies have been conducted to identify people's individual motives for visiting farmers' markets (Table 1). The aim of such studies has been to better define the individual customer segments, which can be used for marketing and management purposes not only by the manufacturers and retailers of products at farmers' markets, but also by farmers' market organisers (Pilař et al. 2018).

The aim of the present article was to identify segments of farmers' market customers in relation to the amount of money they spend at a farmers' market.

MATERIAL AND METHODS

Designing questionnaire

Table 1 shows six selected studies that focused on the given issue; the authors of the study, the sample size, the identified customer segments, and motives of customers are presented.

Based on the results of these studies, we designed a questionnaire containing 14 basic motives for visiting farmers' markets (Table 2). The participants rated each item using a Likert scale (1 – I do not agree with the statement at all; 5 – I completely agree), e.g. "I go to farmers' markets to spend a pleasant time with friends there". The last question was on the approximate amount spent during one visit to a farmers' market.

Participants

The questionnaire was completed by 239 farmers' market customers – the collection of data was carried out personally at three farmers' markets in Prague – capital city of the Czech Republic. Namely, it was conducted at Kulaťák Farmers' Market, Heřmaňák Farmers' Market and Jiřák Farmers' Market, which are private or municipal forms of farmers' markets, from July 28, 2018 to November 4, 2018. Basic characteristics of respondents is as follows: 78.2% women and 21.8% men. In terms of age the respondents were characterised as follows: two (0.845%) participants were under the age of 20 years, 89 (37.24%) were aged 21–30 years, 64 (26.78%) were aged 31–40 years, 49 (20.50%) were aged 41–50 years, 23 (9.62%) were aged 51–60 years, and 12 (5.02%) were over the age of 60 years.

Statistics

The data were input into IBM SPSS 21, where the factors were reduced using exploratory factorial analysis (EFA). The data and factor structure of the extracted factors were then exported into IBM SPSS AMOS 25, where Structural Equation Modeling (path analysis) was used to find the link between the inclination towards one group and the average amount of money that the respondents spent on a visit to a farmers' market. The construct was validated using the values Goodness-of-Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Incremental Fit Index (IFI) (Meyers et al. 2016) and Minimum Discrepancy (CMIN/DF) (Munro 2005).

RESULTS AND DISCUSSION

The EFA extracted 4 factors, that explained 63.3% of the variance of the data (Table 3). The Kaiser-Meyer-Olkin test was used to assess the suitability of the factor analysis, and this was at a high 0.673. Bartlett's Test of Sphericity indicated a sufficient probability level ($p < 0.001$). These results showed that the data were suitable for factor analysis (Pett et al. 2003).

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Table 1. Customers' motives for visiting farmers' markets

Authors	Sample size (number)	Identified segments	Identified methods	What customers want
Pilař et al. (2018)	13 862	product orientation; emotional orientation; social orientation; social product orientation	social media analytics and social network analysis	organic, fresh, local, vegan, vegetarian and healthy food; vegetables and fruit; to support local farmers; flowers and positive emotions such as love and the summer-time
Oñederra-Aramendi et al. (2018)	396	instrumentalist orientation; collective orientation; social orientation; cultural orientation	multiple factor analysis completed with a cluster analysis	satisfaction of their own or their family needs; to support local agriculture, local economy or to support environmental concerns; social contact, both with producers and with other consumers; to go out of habit and regularly visit the market
Pokorná et al. (2015)	217	basic orientation; functional orientation; emotional orientation; social orientation	questionnaire survey	to stock up on fresh and healthy food; to feel good about their purchase; to eat fresh and healthy food; to protect their family and their health; to satisfy curiosity; to spend free time; to look modern/trendy; to learn something; to buy specialty goods
McNeill and Hale (2016)	200	committed loyals orientation; experience orientation; product orientation	factor analysis; cluster analysis	to eat healthier, more natural and fresher produce; a higher queality alternative to produce from supermarkets; the 'fun' and 'excitement' of the experience at the market; products that are cheaper than thoseat a supermarket
Chen and Scott (2014)	534	social orientation; spatial orientation; natural orientation	structural equation modelling (SEM)	friendly and helpful service; to learn about products; to enjoy the atmosphere; to meet other people; product that are fresh and free of artificial additives; to support local farms; to reduce their carbon footprint
Jilcott Pitts et al. (2016)	607	–	Chi-square test and logistic regression model	fresher produce; to support local farmers; better quality of products; tastier produce

Source: own elaboration based on literary research

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Table 2. Rotated component matrix: farmers' market motivation factors

	F1	F2	F3	F4
Purchase of organic foods	**0.646**	0.001	0.250	0.362
Vegan or vegetarian products	0.173	0.273	0.356	**0.620**
Taste better	**0.759**	0.167	0.136	–0.191
To be consumed immediately on site	0.039	–0.143	**0.734**	0.060
Considered to be the healthiest	**0.821**	0.273	0.093	0.058
Freshest foods	**0.768**	0.160	–0.087	–0.039
Flower and other products for pleasure	0.481	0.053	**0.633**	–0.132
Harder to find (e.g. gluten-free foods)	–0.155	–0.094	–0.272	**0.680**
Attractive environment	0.082	0.407	**0.588**	–0.110
I can to spend pleasant time with friends	–0.006	0.222	**0.823**	0.020
Part of my lifestyle	0.050	**0.736**	0.237	–0.051
I can talk to the retailers	0.123	**0.771**	0.308	0.144
Local products, thus reducing CO_2	0.302	**0.693**	–0.080	0.258
Support local retailers	0.214	**0.706**	–0.137	–0.140

F1 – product orientation; F2 – personal social responsibility; F3 – entertainment and emotional orientation; F4 – alternative food (diet orientation); bold variables – variables included in the factor

Source: own elaboration

On the basis of the EFA, 4 factors were extracted, which, according to their containing variables, can be referred to as follows: (1) product-oriented customers – F1; (2) personal social responsibility-oriented customers – F2; (3) entertainment and emotional-oriented customers – F3; and (4) alternative food-oriented customers – F4 (Table 2). The individual factor loadings were relatively high and above 0.3 (0.588–0.821); thus, according to Pallant (2005), we can assume that they belong to the factor. The fact that the individual variables pertain to the factor can be seen in Table 2.

(1) Product-orientated customers – F1. The first identified factor contained customers visiting farmers' markets to purchase food, which they think tastes better, and is healthier and fresher. The largest identified group was the motive to purchase organic food, and this factor included the largest proportion of respondents and it explained 19.3% of the variance. These results are in line with the findings from Birch et al. (2018), who reported that the main motivation of customers of the farmers' markets customers is the belief that they are buying healthy and safe foods.

(2) Personal social responsibility-orientated customers – F2. The second identified factor was customers for whom the purchasing goods at farmers' markets was part of their lifestyle. These customers are visiting the farmers' markets so that they can talk with and support local farmers. These motives were also reported by Polimeni et al. (2018) and Oñederra-Aramendi et al. (2018), who also reported other similar characteristics of this group of customers, such as the purchase of local products to reduce CO_2. This factor explained 18.3% of the variance.

Table 3. Total variance explained

Factor	Initial eigenvalues			Rotation sums of squared loadings		
	total	% of variance	cumulative %	total	% of variance	cumulative %
1	4.337	30.980	30.980	2.705	19.321	19.321
2	1.836	13.114	44.094	2.564	18.316	37.637
3	1.558	11.126	55.220	2.435	17.396	55.033
4	1.137	8.120	63.340	1.163	8.307	63.340

Source: own elaboration

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(3) Entertainment and emotional-oriented customers – F3. Relatively new, but from a farmers' market point of view an interesting group of customers, describes factor 3. These customers are visiting farmer' markets to meet friends, enjoy a pleasant environment and buy products that can be consumed immediately or that are intended for pleasure, such as flowers. These or similar motives have been reported by Chen and Scott (2014) and Pokorná et al. (2015). This factor explained 17.4% of the variance. This finding might be interesting for sellers at the farmers' markets, because these customers, (together with product--oriented customers), spent the most money (Table 4).

(4) Alternative food-oriented customers – F4. The smallest factor contained customers who go to the farmers' markets to buy alternative foods, such as vegan or vegetarian products, or products that are harder to get (such as gluten-free foods). This was the smallest identified group of customers and explained 8.3% of the variance.

Thus, we identified three strong factors (F1–3), with similar representations (17.3–19.3%). The identification of these factors indicates that farmers' markets should not only be considered as a place to buy healthy, fresh, and organic food, but also a place where customers can meet up with friends and consume the food they have just bought on site. These findings support the results of recent surveys (Annes and Bessiere 2018; Pilař et al. 2018), which report that entertainment is an important part of shopping at farmers' markets.

The factor structure was used to construct of a theoretical model, for which four hypotheses were formulated (Figure 1).

These hypotheses were as follows:

H_1: Product-oriented motivation will significantly influence the amount of the money spent at farmers' markets;

H_2: Personal social responsibility-oriented motivation will significantly influence the amount of the money spent at farmers' markets;

H_3: Entertainment and emotional-oriented motivation will significantly influence the amount of the money spent at farmers' markets;

H_4: Alternative food-oriented motivation will significantly influence the amount of the money spent at farmers' markets.

Structural modelling

Based on the results of the theoretical model, F1 (product-oriented customers) and F3 (entertainment and emotional-oriented customers) can be

Table 4. Results of the structural equation model after modification

Causal Relationship		Normalised path coefficient	S.E.	C.R.	*p*
Purchase of organic foods	<--- F1	0.532		f.p.	
Considered to be the healthiest	<--- F1	0.971	0.245	5.834	***
Freshest foods	<--- F1	0.603	0.122	6.020	***
Part of my lifestyle	<--- F2	0.656		f.p.	
I can talk to the retailers	<--- F2	0.873	0.182	7.063	***
Support local retailers	<--- F2	0.446	0.079	4.963	***
Vegan or vegetarian products	<--- F4	0.556		f.p.	
Harder to find (e.g. gluten-free foods)	<--- F4	0.922	0.297	–2.704	0.007
To be consumed immediately on site	<--- F3	0.532		f.p.	
I can spend pleasant time with friends	<--- F3	0.971	0.498	4.028	***
SM	<--- F3	0.608	0.267	2.280	0.023
SM	<--- F4	–0.744	0.625	–1.191	0.234
SM	<--- F1	0.451	0.208	2.165	0.030
SM	<--- F2	–0.088	0.221	–0.396	0.692

*** $p < 0.001$; F1 – product orientation; F2 – personal social responsibility; F3 – entertainment-emotional orientation; F4 – alternative food orientation; SM – the amount of the money spent at farmers' market; S.E. – standard error; C.R. – critical ratio; f.p. – fixed parameter

Source: own elaboration

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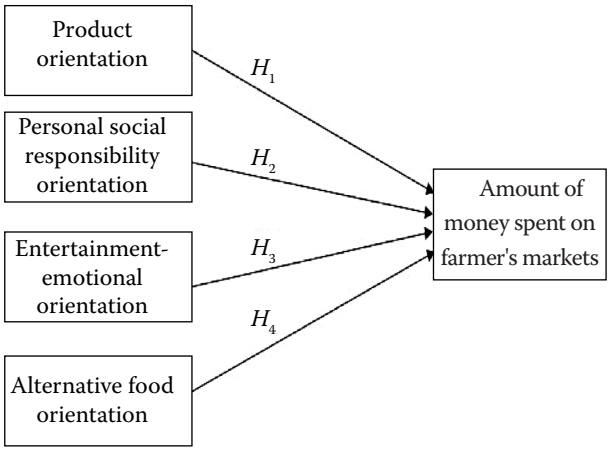

Figure 1. Theoretical model

Source: own elaboration

identified as a statistically significant factor in relation to the amount of money that customers spend at farmers' markets. However, this model did not fulfil the basic criteria of the FIT indices and was therefore modified according to the modification indices, which improved the given values of the overall model.

According to the modification indices, four variables that reduced the stability of the model were removed. The model was then accepted as reliable on the basis of all five FIT indices (GFI = 0.929; RMSEA = 0.08; CFI = 0.906; IFI = 0.903; CMIN/DF = 2.041). Reliability was measured using composite reliability, also known as Dillon-Goldstein's rho (Chin 1998), and validity was measured using Average Variance Extracted (AVE). Dillon-Goldstein's rho values were as follows: F1: 0.530; F2: 0.464; F3: 0.613; and F4: 0.580. AVE values were as follows: F1: 0.759; F2: 0.708; F3: 0.745; and F4: 0.722. For factor 2, the reliability rho value was below 0.5; however, we can still accept 0.4, because an AVE less than 0.5 but with a composite reliability higher than 0.6 indicates that convergent validity of the construct is still acceptable (Fornell and Larcker 1981).

From the four hypothesised paths, two were significant (Table 4). The path from product orientation to the amount of money spent (H_1) showed a medium-strong (β = 0.451**) positive and significant ($p < 0.05$) effect. H_1 was therefore supported. This indicates that product orientation influences the amount of money spent. H_3 was also supported, whereby the entertainment and emotional-oriented segment showed a positive and significant effect on the amount of money spent (β = 0.608*; $p < 0.05$). These results indicate that both product and entertainment/fun plays a significant role in the amount of money spent at farmers' markets. No significant effect was observed in the segment oriented towards an alternative food diet (vegan, vegetarian and gluten-free). This partially supports results from Luck and Norwood (2016), who reported that vegetarians spend less money than do meat eaters, but that those who claim to be vegetarian yet eat or buy meat spend more money on food than do meat eaters.

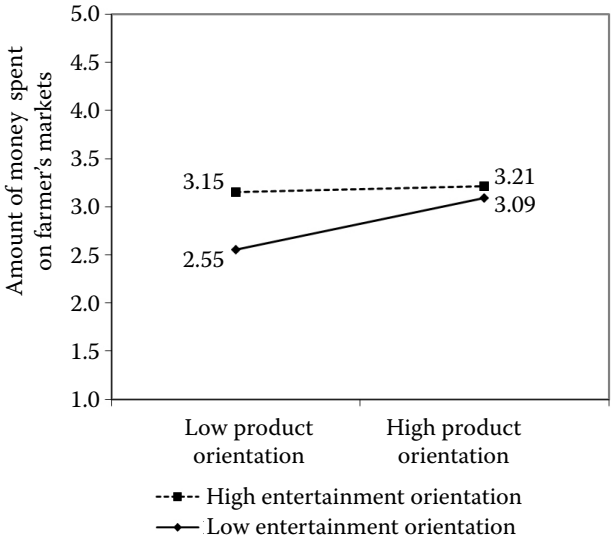

Figure 2. Moderation effect of entertainment and emotion orientation

Source: own elaboration

Moderation effect of entertainment and emotional-orientation on amount of money spent at farmers' markets in direct effect of product orientation

There was a negative moderation effect of entertainment and emotion orientation on the link between product orientation and the amount of money spent at farmers' markets. The greater the orientation on entertainment, the lower the increase in the amount of money spent due to the inclination towards product orientation (3.09 – 2.55 = 0.54) > (3.21 – 3.15 = 0.06).

These results indicate that if a customer's farmers' market visit is not motivated by entertainment, the amount spent by that customer increases with his or her increasing orientation on the product (fresh, healthy and organic); however, if a customer is strongly motivated by entertainment, the increase in the amount spent by that customer is also significantly less as a result of his or her product orientation. Thus the least amount of money is spent

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by a customer who has both a low product orientation and also a low entertainment orientation (2.55), and the most money is spent by a customer with a high entertainment orientation and a high product orientation (3.21). The difference between high product orientation + high entertainment orientation (3.21) and high product orientation and low entertainment orientation (3.09) was very low, which could indicate that customers with a high product orientation and also a low entertainment orientation (3.09) spend a similar amount of money as customers with a low product orientation and high entertainment orientation (3.15). This implies that customers who are both entertainment and product-oriented divide their budget between those two groups, and that entertainment-oriented customers spend significantly less on product-oriented products (Figure 2).

Finally, it is important to extrapolate these results to the representation of the individual farmers' market segments, where the product-oriented customers factor explains 19.321% and emotional-oriented customers 17.396% of the overall variance.

CONCLUSION

We identified four areas that characterise customers' motivation to visit farmers' markets, as follows: (1) product orientation; (2) personal social responsibility orientation; (3) entertainment and emotional orientation; and (4) alternative food orientation. These results support the idea that farmers' markets are no longer just a place to buy healthy, fresh, and organic food, but also a place to meet up with friends, spend leisure time, eat food on site, and shop for an alternative foods (such as vegan, vegetarian, and gluten-free foods). The structural modelling revealed a positive and significant effect between "product orientation", "entertainment and emotional orientation", and the amount of the money spent at farmers' markets. Moreover, we also identified a negative moderation effect, whereby customers with a high entertainment orientation do not increase their spending with an increasing product orientation as much as customers who are not motivated by entertainment. These findings are important in terms of using a product diversification strategy; on the basis of our results, it can be recommended that farmers' markets offer both products for both product-oriented customers (fresh, healthy, and organic products), and entertainment and emotional-oriented customers (products for immediate consumption and other items that people purchase for pleasure). These recommendations are directly relevant to the organisers of farmers' markets, who, on the basis of customer structure, should not only generate appeal not only for the product-oriented customers (e.g. by providing retailers that sell fresh, healthy and organic products), but should also create a place at the farmers' market where people can meet up with friends and consume the products they have purchased on site and provide the relevant retailers who sell such products, including flowers. These recommendations are also relevant for the farmers themselves, who should adapt the variety of the products they offer at farmers' markets accordingly, with the aim of increasing their sales.

The research is geographically limited to Prague – the capital of the Czech Republic. In future research, it is necessary to conduct an extensive multi-country analysis with the aim of identifying regional urban-rural differences to better understand regional and cultural differences in the area of customer behaviour on the farmers' markets. A second limitation is the period of data collection from June to November, which does not encompass all season.

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