

MARKETING EFFICIENCY PERCEPTION FACTORS OF LOCALLY SUPPLYING FOOD AND ITS IMPACT ON SUSTAINABILITY

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Abstract: Food production and food markets are directly influenced by globalization trends, which are represented by the merger at larger scale of food production operations. One aspect of opposing small agri-food producers to this phenomenon is the introduction of appropriate marketing strategy.

The aim of the research was to identify the basic elements of a marketing strategy with which it would be possible to compete effectively with local products in the local market.

The purpose of this research is to show that the development of adequate marketing strategies for short agri-food supply chains at the local level for competitive, efficient, and sustainable local food production.

Key words: marketing efficiency, food production, short agri-food supply chains, sustainability

INTRODUCTION

Food production and food markets are directly influenced by globalization trends, which are represented by the merger at larger scale of food production operations as well as the food market itself. Large global food producers, distributors and retailers represents a kind of threat to small local food producers. Large systems operate on the principles of economies of scale, which gives them a competitive advantage in a highly saturated market. One aspect of opposing small agri-food producers to this phenomenon is the introduction and implementation of short agri-food supply chain models, which primarily means an appropriate marketing strategy.

Emerging forms of short food supply chains appear in different forms, and the most common forms is direct sales, which also includes direct marketing activities, i.e., direct interaction with consumers. Direct interaction reduces the number of intermediaries between producers and consumers. And very often it avoids them, which enables the development of models of local and close cooperation. In addition to the social aspect of connecting consumers and producers, short food supply chains give farmers the opportunity for economic gain in terms of increased income, strengthening the competitiveness of enterprises, but also facilitates the development and implementation of the concept of sustainable development [13]. This organization of short food supply chains also means its efficiency, not only economic, but also in terms of delivering social benefits to the individual and the community. Namely, this type of collaborative effort involves a wider range of stakeholders, so it is possible to expect increased mutual benefit delivery for all [18]. It can enable the involved farmers to develop new products and processes to add value and improve the range of products available to consumers [5]. And the efficiency of the local market itself is achieved, which certainly gives a new perspective for local development [19]. This development should be viewed especially in the context of rural development, i.e., efforts to economically and socially revitalize and further attractive rural areas as a domain that in some parts of Europe is in some way neglected and left to extinction.

The focus of short food supply chains are small agri-food enterprises whose market flexibility and elasticity allow them a short travel time of the product to the final consumer

[15]. Although for now it could be described as a niche market strategy, the potential that exists on the demand side indicates the readiness for these segments to develop into a solid market domain. Such food supply chains are basically driven by demand because they respond to consumers' preference for simple and local food that is assumed to be more original and fresher. Consumers associate short chains with the idea of traceable and transparent processes. Consumers in short chains tend to have more personal contact and prefer face-to-face relationships that are considered more reliable and can bring warmer connections between people and personal touch in transactions [16]. Moreover, these consumers often want to nurture a smaller, family business with stronger territorial roots that is seen as a guardian of tradition and local values and promises more equal market relations [10]. Alternative ways of marketing goods in short chains are direct sales, markets, specialized stores and specialized promotional sales fairs, home delivery, schools, hospital, etc. The potential of the digital marketing sphere as a very favourable and expeditious communication and sales platform should also be further evaluated [8]. The main challenges for farmers are those of a marketing nature, which relate to the promotion, image building, or brand of the company, or product because they primarily lack adequate support in the form of education, and very common are financial problems [14]. Having mastered marketing as a technique and instrument of small business management, these entrepreneurs create opportunities to access the market in the short term but also to achieve a stable relationship with potential consumers over a longer period.

Therefore, the impacts of short food supply chain on the overall market performance of farmer entrepreneurs can be extremely significant [4]. It is primarily manifested through increased profit, productivity, production costs, and competitive price [12,17]. The results of individual studies show that participation in the short supply chain is a profit maximization strategy and risk management tool for entrepreneurial farmers [7]. The increase in profits is attributed to the benefits of productivity, expanding farm size, and reducing risk, not because of price premiums or cost savings. Therefore, it is more than clear that indicators of the development of local food production and distribution are positively related to the application of marketing activities [3]. In addition, the positive impact through economic progress is reflected in the social benefit of the individual or his/her family, i.e., the benefit is visible in the increase in the level of all social aspects [2].

Recognizing the advantages of developing and implementing short food supply chains as a potentially strong tool for economic empowerment of small agricultural enterprises and related individuals, as well as local communities, it is important to understand that only through the application of adequate marketing efforts and tools can implement strategies for the development of efficient and sustainable short food supply chains.

In this sense, the aim of the research is to determine those basic elements of the marketing strategy with which it would be possible to compete effectively with local products in the local market and for local consumers. To this end, placements and possible market barriers, as well as consumer behaviour as predictors of effective marketing strategies that influence the creation of sustainable short food supply chains, will be explored.

The purpose of this research is to show that the development of adequate marketing strategies for short supply chains at the local level encourages the development of competitive, efficient and sustainable local agricultural production.

MATERIALS AND METHODS

The research was conducted on a sample of agricultural producers in northwestern Croatia in order to gain insight into their opinions and attitudes regarding the assumptions for developing effective marketing strategies of their enterprises in the context of developing short food supply chains in the local context. The target group of respondents were entrepreneurs in agriculture. The basic criteria for selecting respondents were engaging in agricultural production as a primary economic activity. They were selected from the county's agricultural advisory service database where they are listed as official local suppliers of agricultural products. For this purpose, a survey was conducted. Since the research had primarily the character of quantitative research, it was based on statistical measurements, i.e. conducted by the survey method, and in order to obtain information on the relevant research domain, a survey questionnaire was used as a research instrument. Questionnaire variables (excluding socio-demographic questions) were constructed using a five-point Likert scale. The target group of respondents consisted of a total of 200 farmers, but due to incomplete data in the survey, 48 surveys were excluded from the analysis. The target group of 200 farmers was selected because this number of farmers is proportional to the number of the largest farmers who actively participate in agricultural production in the study area. Therefore, the number of relevant respondents is a total of 152. Respondents are engaged in various types of agricultural production such as livestock breeders (23), cheesemakers (16), fruit growers (59), vegetable growers (42), beekeepers and medicinal herbs growers (12). A total of 38 questions of mostly closed type were included in the survey questionnaire, to which the respondents answered by a simple procedure of rounding off the selected from the offered answers, assigning a grade of 1-5, average values and exact amounts. The farmers in the sample are mostly male (63%), and to a lesser extent female (37%), with an average of 45 years of age and 20 years of experience in agriculture. The youngest farmers are in the group of beekeepers and have an average of 31 years of age. The oldest farmers are fruit growers with an average age of 53 years. Farmers are engaged in agriculture mostly within the family farm (52%).

The construct of an efficient sustainable short food supply chain is defined as a dependent variable. As farmers are increasingly forced to navigate the market by opposing the mass supply of food, they were asked questions to assess the benefits that would be achieved by organizing a short food supply chain at the local level. Dependent variable constructed using elements to evaluate efficient short supply chains. The items are grouped into three groups and relate to the market efficiency of short food supplies, added value for consumers and the development of sustainability. The particles of the dependent variable were measured on a 5-point Likert scale.

In measuring the perception of marketing efficiency, a measurement scale was constructed with the aim of assessing the attitudes and opinions of agricultural entrepreneurs related to aspects of effective forms of selling their own products, barriers and restrictions on the market and the impact of modern consumer behaviour [11,20]. Namely, according to some empirical research certain specific forms of sales and distribution in the context of the local market give the agricultural company an advantage over conventional forms of sales [6]. Although local markets show a lower dose of economic adaptation and are seasonally sensitive, it is estimated that positive effects on the overall economic viability of such models are nevertheless possible [9]. At the same time, consumers prefer this way of buying local agri-food products without paying attention to economic elements such as the price of the product, but at the same time expect the delivery of higher value products [1]. This conceptual approach of the development of the local food market has enabled the development of a short-chain marketing effectiveness construct, defined through three dimensions: sales patterns, market constraints, and

consumer behaviour [21]. Correlation and regression analysis were applied to test the set hypothesis.

RESEARCH RESULTS

The dependent variable construct efficient sustainable short food supply chain was validated by checking the reliability of the items and the multidimensionality of the construct. As a prerequisite for the factor analysis of 18 items of this construct, KMO (0,881) and Bartlett test ($\chi^2 = 2780,468$, $df = 153$, $p < 0,001$) were performed. Factor analysis was performed using the Varimax method in addition to the Kaiser criteria, and by factoring, three factors were obtained, market efficiency, added value for consumers and elements of sustainability. Each of the three factors has an acceptable level of reliability. Psychometric analysis of the entire measuring instrument shows its internal consistency as the standardized Cronbach’s alpha coefficient is 0.860 and the overall explanation of variance is 73.44%. The performed analysis shows the reliability of the measured construct. In this way, the measured construct was constructed as an efficient sustainable short food supply chain as an average score (4,03) of 18 items that make up this construct (the abbreviated name of the construct is S_SFSC).

For the independent variable of marketing effectiveness perceptions, the same process of checking the reliability, ie multidimensionality of this construct was performed. Prior to performing the exploratory factor analysis, the suitability of the data for further analysis was checked using the Kaiser-Meyer-Olkin test (KMO) and the Barlett sphericity test, respectively. Since the Kaiser-Meyer-Olkin coefficient was 0.643, the adequacy of the data for factor analysis was determined. The Bartlett sphericity test was also statistically significant ($\chi^2 = 767.005$, $df = 153$, $p < 0.001$), which indicated a further course of factor analysis. The results of factorization using the Varimax method and applying the Kaiser criterion confirm the distribution of particles according to three factors: sales patterns (3,31), market constraints (2,97) and consumer behaviour (3,23). All three factors have an appropriate level of reliability, sales patterns $\alpha = 0.637$, market constraints $\alpha = 0.612$ and consumer behaviour $\alpha = 0.789$. the total clarity of its variance is 66.28%. All manifest variables with an eigenvalue greater than one were formed into a single component. Thus, the measured construct of marketing performance perceptions is reliable and one-dimensional, and the proposed factors were further used as a manifest variable that was constructed as the average score of the mentioned standardized variables (PME).

One dependent (S_SFSC) and one predictor variable (PME) were defined and a simple correlation and regression analysis was performed (Table 1).

Table 1.
Correlation matrix of the dependent variable S_SFSC and the independent variable PME

		S_SFSC	PME
S_SFSC	Pearson Correlation	1	0,544
	Sig. (2-tailed)		0,000
	N	152	152
PME	Pearson Correlation	0,544	1
	Sig. (2-tailed)	0,000	
	N	152	152

Source: Author, 2021

In accordance with the values of the Pearson correlation coefficient, it is evident that the correlation is positive and that there is a statistically significant correlation of the observed variables ($p < 0.001$). Regression analysis based on the established correlation and

knowledge of the values of the predictor variable creates predictions about the values of the dependent variable (Table 2).

Table 2.
Evaluation of the representativeness of the regression model for the dependent variable S_SFSC

Person's correlation coefficient R	coefficient of determination r^2_{kor}	corrected coefficient of determination	estimated stand. error	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
0,544	0,410	0,402	0,44825	0,410	88,202	3	149	0,000

Source: Author, 2021

Finally, a regression model was obtained for the dependent variable efficient sustainable short food supply chain (Table 3).

Table 3.
Regression model coefficients for the dependent variable S_SFSC

model	non-standardized regression coefficients		standardized regression coefficients	t	Sig.
	B	std. error	β ponder		
Constant	3,776	0,486		7,771	0,000
S_SFSC	0,083	0,154	0,244	0,537	0,000

Source: Author, 2021

The influence of the independent variable on the dependent variable was assessed as statistically significant ($p < 0.001$) with a standardized coefficient of 0.244. For the observed two variables, the coefficient of determination (r^2) is 0.410, i.e., that 41% of the variations in efficient sustainable short food supply chains are the result of variations in the perception of marketing efficiency of agricultural enterprise representatives. Thus, the results of correlation and regression analysis show the existence of statistically significant correlations, and it can also be considered that the surveyed agricultural enterprises found that marketing efficiency has an impact on the development of efficient sustainable short food supply chain, which was confirmed by relatively developed coefficient of determination.

CONCLUSIONS

Local food production has always been a part of tradition and an important component of life in rural areas in the Republic of Croatia. Recently, the great benefits of locally produced food for human health, the community and especially for agricultural enterprises themselves have been recognized. This is one of the reasons why there is a growing interest in the development of innovative domestic food supply chains that involve locally produced agricultural products available in the local market where the farmer sells them directly to the consumer including a maximum of one intermediary.

Consumer interest in locally produced food has risen sharply in recent years. Although sales of locally grown food still make up only a small portion of total food sales, it is believed that this may be one of the more interesting market segments in the near future. This segment can already represent a number of different potential and perceived benefits, primarily economic for entrepreneurs in agriculture. They are also beneficial for consumers, namely environmental, health, safety, nutrition, etc. With a determined market opportunity, it is important that entrepreneurs in agriculture understand the importance of

timely and accurate marketing planning and adaptation to the market situation. In this sense, it is important to determine which elements from the marketing environment must be identified, i.e., how to actively and efficiently apply strategic and operational marketing to develop efficient and sustainable local food supply chains.

For the development and application of efficient sustainable short food supply chains as well as the determination of appropriate elements of marketing effectiveness, it was necessary to ensure their measurement. The results of the research confirmed the multidimensionality of marketing efficiency and confirmed the psychometric characteristics of the measuring instrument for efficient sustainable short supply chains. The conducted regression analysis shows the existence of predictive ability of appropriate elements of marketing efficiency in the process of defining and designing efficient sustainable short food supply chains ($p < 0.001$) and the results of research are in line with studies that also showed the importance of marketing management for the development of effective sustainable short food supply chains that will enable farmers to have market efficiency for their businesses, and added value for consumers, as well as the development of sustainability for the community and society in general.

Although the results of the study are affirmative, given the relatively small number of respondents, as well as the limited geographical area of the research, it can be concluded that these results should be further confirmed, primarily by applied research on a larger number of respondents and at the national level as well. Also, this research was conducted as a one-time research, so in the future longitudinal research should be encouraged in accordance with the possibilities, which would provide a better and deeper insight into the researched issues.

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