
The Role of Gastronomic Services in Meeting the Nutritional Needs of Rural Households: The Case of the Masovian Voivodeship in Poland

Submitted 22/04/22, 1st revision 13/15/22, 2nd revision 10/06/22, accepted 25/06/22

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Abstract:

Purpose: The purpose of the article was to assess consumer behavior related to the use of gastronomic services by rural residents.

Design/Methodology/Approach: The conducted analysis was based on own research with the use of a questionnaire among 302 rural households in Poland. The analysis of the study results was performed in the IBM SPSS Statistics 26 program. The Kruskal–Wallis test by ranks and the Spearman's rank correlation coefficient were used.

Findings: The own research shows that the intensity of using out-of-home nutrition in various types of gastronomic establishments differs for individual types of households. The variables describing the socio-economic characteristics of households include the number of people in the household, the number of children, the average income per person in the household, the area of the farm, and the type of rural household. Research has shown that the more people in the household, including children, the less frequent use of eateries. Households characterized by higher incomes use the services of gastronomic establishments more often.

Practical Implications: The assessment of consumer behavior of rural residents should be extended by research on consumer awareness of the quality of food consumed in gastronomic establishments.

Originality/value: In the case of Poland, there is a lack of research and knowledge about the preferences of rural residents regarding the use of gastronomic establishments and information on whether, as rural residents, undertake food production as part of their household, and then prepare meals for the household members using their own resources.

Keywords: Rural households, catering services, gastronomic services, food prosumption, Poland.

JEL classification: C18, C83, D1, D12, Q01.

Paper Type: Research study.

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1. Introduction

Gastronomic services are the oldest and most dynamically developing forms of service activity (Kwiatkowska and Levytska, 2009). The use of gastronomic services by consumers is now a common phenomenon and is associated not only with the need to satisfy nutritional needs, but more and more often with the satisfaction of higher needs, such as the need for social coexistence, belonging to a given group, prestige, and self-development (Kwiatkowska, 2009). According to Gutkowska and Piekut (2016), "it has become fashionable to celebrate occasional celebrations in gastronomic establishments".

In recent years, intensive development of the gastronomic services market in Poland has been observed. The increase in population income meant that Poles were more and more willing to eat outside, and more and more foreigners came to the country to use the gastronomic industry. Chains of bars and restaurants were created, and the accommodation base and the gastronomic offer developed (Kwiatkowska and Levytska, 2007). The potential of the gastronomic market was huge until the outbreak of the Sars-CoV-2 virus pandemic. It influenced changes in gastronomy and collective nutrition for the following years (Gramza-Michałowska and Kulczyński, 2021). The impact of the pandemic on gastronomy around the world was unprecedentedly rapid and dramatic (Arlindo *et al.*, 2021). This resulted in problems in the functioning of gastronomic establishments, and thus the liquidation of many restaurants, bars, and hotels, and huge losses for cooperating external companies that deliver goods to restaurants (Linkowska, 2021).

The purpose of the article was to assess consumer behavior related to the use of gastronomic services by rural residents in Poland. Rural residents are a specific socio-economic group, as they are characterized by different consumption patterns resulting from the productive nature of the household (in the case of farmers' households), but also by a smaller offer of gastronomic establishments in rural areas. Most of the gastronomic establishments are located in the city, therefore the access of rural residents to these places should also be taken into account. An interesting perspective for further research conducted by the authors in the future will be the assessment of how the pandemic influenced the behavior of rural consumers regarding the use of gastronomic services, as this aspect was not addressed in this study.

2. Conditions for the Development of Gastronomic Services

Among the typical conditions for the development of gastronomic services, macro- and microeconomic factors should be distinguished. The first group of factors is related to the structure of the national economy. The second group includes mainly household income and expenses (including food expenses), social and cultural conditions, and changes in lifestyle and organization (Levytska and Kowrygo, 2007).

Kwiatkowska (2009) showed a statistically significant relationship between sex, age, place of residence, and the use of gastronomic services. Her research shows, *inter alia*, that consumers living in Warsaw used the services of restaurants statistically significantly more often than those living in the countryside.

In their research, Gutkowska and Piekut (2016) pointed out that, in addition to economic factors, the level of expenditure on gastronomic services is influenced by determinants related to the place of residence, because higher expenditure is recorded in densely populated areas than in rural areas. The research carried out by Chmielewska (2013) shows that the development of road infrastructure, and improvement of transport accessibility, including the improvement of the ownership of automotive goods by rural households, contribute to an increase in expenditure related to gastronomy and hotels in rural households. These changes applied to a greater extent to non-agricultural rural households, and a lesser extent to farmers' households.

Farmers' households are one of the types of households that use meals and accommodation outside the home less frequently (Stanisławska, 2012). According to Gutkowska and Piekut (2014), in this group of households, "the degree of mutual interpenetration of the production and consumption character of the household affects the hierarchy of perceived and realized needs", which results in consumption patterns that are different concerning other socio-economic groups.

Differences in the frequency of using restaurants between rural and urban households of farmers and other groups result also from eating habits related to self-production of food. About 95% of farmers' households use self-supply with food, *i.e.*, natural consumption (Stanisławska *et al.*, 2014; Kozera *et al.*, 2014). This situation, with increasing awareness of healthy eating, may not be conducive to the use of gastronomic services outside the home and the development of new eating habits. Another factor influencing the use of gastronomic services outside the home in farmers' households is the difference in the availability of this type of premises between the city and the countryside, which affects social behaviors, such as the choice of meeting place and their frequency (Kowalczyk, 2014; Gutkowska and Piekut, 2014).

Research and observations show that although the traditional model of nutrition is currently popular in Poland, more and more consumers use gastronomic services every year. The change in the traditional model is particularly noticeable in large urban agglomerations, but the share of gastronomic services in meeting nutritional needs outside the home is also increasing among rural residents, which is manifested by an increase in expenditure on eating outside the home in this group of households (Głowicka-Wołoszyn *et al.*, 2017).

Among the inhabitants of the village, a group of farmers deserves special attention. Farmers, like retirees and pensioners, are characterized by the lowest incomes

compared to other socio-economic groups, and thus a lower budget for free decisions, which in turn results in less activity of these people in social life. Also, the specificity of work on a farm, associated with high time commitment, mainly during the holiday season, is not conducive to trips or trips, and the same expenses for hotel services, compared to households living off other forms of income.

The decrease in the amount of expenditure on gastronomy observed in farmers' households may be related to the strong correlation between production and consumption (natural consumption) in this group of households, which, combined with the growing awareness of healthy and ecological nutrition, may not be conducive to using gastronomic services outside the home. The factors unfavorable to the increase in the frequency of spending on restaurants and hotels in farmers' households include the availability of this type of service in the countryside (Głowicka-Wołoszyn *et al.*, 2017).

3. Materials and Methods

The aim of the article was to assess consumer behavior related to the use of catering services by rural residents. The empirical material contained in the study comes from a survey conducted in the rural areas of Mazowieckie Voivodeship, in the form of a questionnaire on a sample of 302 respondents in 2017 in Poland. The analysis of the study results was performed in Excel and IBM SPSS Statistics.

In order to determine whether there is a correlation between the types of rural households and the use of catering services, the rank Kruskal-Wallis test and the Spearman rank correlation coefficient were used (Field, 2013). Socio-economic characteristics of households taken into account in the analysis are the number of people in the household, the number of children in the household, income per person in the household, the area of the farm, type of household that determines the degree of its connection with agriculture (agricultural, agricultural and employee, not related to agriculture).

The Spearman's rank correlation coefficient is used to determine whether there are statistically significant correlations between variables measured at the ordinal or quotient level, but whose distribution significantly differs from the normal one. Three levels of statistical significance were adopted: $p < 0.001$, marked as ***, $p < 0.01$, marked as **, and $p < 0.05$, marked as *. The Spearman's rank correlation coefficient is given by the formula:

$$r_s = 1 - \frac{6 \cdot \sum d_i^2}{n(n^2 - 1)},$$

where:

n - number of observations (X and Y have the same number of observations),

d_i - the difference between the X and Y ranks: $RX_i - RY_i$.

The Kruskal–Wallis test by ranks is used to determine whether more than two groups differ significantly from each other in a statistically significant manner in terms of variables measured at the ordinal or quotient level, but whose distribution is significantly different from normal. The following symbols are used in the tables: M - arithmetic mean, Me - median, SD - standard deviation, H - statistic of the Kruskal–Wallis test by ranks, "p" - the significance of the Kruskal–Wallis test by ranks. Three levels of statistical significance were adopted: $p < 0.001$, marked as ***, $p < 0.01$, marked as **, and $p < 0.05$, marked as *. The formula for the Kruskal–Wallis test by ranks is:

$$H = \frac{12}{N(N+1)} \sum_{i=1}^p \frac{R_i^2}{n_i} - 3(N+1),$$

where:

H – Kruskal–Wallis test by ranks,

N – number of observations,

p – number of compared groups,

R_i – a sum of ranks in a given group,

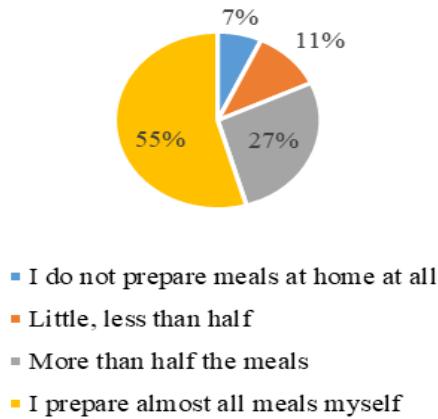
n_i - number of observations in a given group.

The frequency of using gastronomic services outside the home was expressed on a scale of 1-7, where: 1 - not at all, 2 - occasionally, 3 - once a month, 4 - several times a month, 5 - once a week, 6 - several times a week, 7 – daily. It was therefore possible to treat this variable as quantitative and to calculate both linear correlations with ordinal and quantitative variables (number of people on the farm, number of children on the farm, average income on the farm). The self-supply meal preparation variable was treated similarly, but the respondents answered on a 4-point scale: 1- not at all, 2-less than half, 3-more than half, 4-all.

Although the responses cannot be taken as representative of the entire population, they provide the basis for formulating more research hypotheses and planning new activities.

4. Results and Discussion

Satisfying food needs can be done by preparing meals at home or using gastronomic services. Self-supplied products are used for meals prepared at home (garden with vegetables, farm). It is also possible to buy unprocessed food and cook the dish yourself. During the survey, respondents were asked how often they prepare their meals at home. More than half of the respondents declare that they prepare almost all meals at home. Less than 7% of the respondents do not prepare meals at home and use only the services of gastronomic establishments (Figure 1).

Figure 1. Preparing meals as part of self-supply in the surveyed households

Source: Own calculations.

Table 1 shows the frequency of using gastronomic services by rural residents in individual types of gastronomic establishments (canteens, bars, cafes, restaurants, and fast-food restaurants).

Table 1. Frequency of using gastronomic services by rural residents

	At all		Occasionally		Once month		Several times month		Once a week		Several times week		Everyday	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
canteens	105	35	79	27	20	7	51	17	21	7	20	7	0	0
bars	72	24	131	45	27	9	47	16	8	3	7	2	2	1
cafes	72	24	134	45	40	14	37	13	7	2	5	2	0	0
restaurants	54	18	139	47	45	15	44	15	10	3	6	2	0	0
fast-food restaurants	38	13	104	35	53	18	54	18	31	10	13	4	4	1

Source: Own calculations.

Canteens are the least frequently used by rural residents. Over one-third of respondents do not use canteens at all. Only 7% of respondents use the canteens several times a week - these are mass gastronomic establishments that provide meals (mainly lunches) to certain groups of consumers, located at the workplace (employee canteens), schools, universities, and holiday centers.

Fast-food restaurants are occasionally visited by 35% of respondents, and 18% declare that they do it several times a month. Fast-food chains are generally accessible, often located in shopping centers, where you can eat cheaply and quickly while shopping (Tomaszewska *et al.*, 2012). Respectively, 14% and 15% of respondents visit cafes and restaurants once a month. Almost a quarter of the respondents do not use bars and cafes.

Table 2. Linear correlations between the number of people in a household and the frequency of using gastronomic establishments outside the home and self-supply in the field of meals preparation

Variables	Number of people in the household	
	rho	p
Frequency of using gastronomic establishment outside the home:		
Canteens	-0.163	0.005**
Bars	-0.097	0.099
Cafes	-0.169	0.004**
Restaurants	-0.160	0.006**
Fast-food restaurants	-0.007	0.911
Self-supply:		
Meal preparation	-0.045	0.446

Source: Own calculations.

Spearman's rank correlation coefficient showed statistically significant negative correlations between the number of people on the farm and the frequency of using canteens, cafes, and restaurants outside the home. Close to significance, a negative relationship also applies to the frequency of use of bars and the number of people in the household. The more people in the household, the less frequent use of canteens, cafes, and restaurants outside the home.

Table 3. Linear correlations between the number of children in a household and the frequency of using gastronomic establishments outside the home and self-supply in the field of meals preparation

Variables	Number of children in the household	
	rho	p
Frequency of using gastronomic establishments outside the home:		
canteens	-0.137	0.019*
bars	0.023	0.701
cafes	-0.027	0.643
restaurants	-0.027	0.644
fast-food restaurants	-0.020	0.730
Self-supply:		
Meal preparation	-0.039	0.513

Source: Own calculations.

Spearman's rank correlation coefficient showed a statistically significant, negative correlation between the number of children in the household and the frequency of using canteens outside the home. The more children on the farm, the less frequent use of canteens outside the home.

Household income is one of the criteria for assessing social and economic processes, and from an economic point of view, it is undoubtedly one of the most important criteria. Income determines the standard of living because it enables the purchase of

goods and services necessary to meet consumer needs, both lower and higher. The amount of income determines the scope of consumption freedom, forcing or encouraging to choose specific needs (Cyran, 2014).

Table 4. Linear correlations between the average household income per capita and the frequency of using gastronomic establishments outside the home and self-supply in the field of meals preparation

Variables	Average household income per capita	
	rho	p
Frequency of using gastronomic establishments outside the home:		
canteens	0.151	0.012*
bars	0.223	<0.001***
cafes	0.218	<0.001***
restaurants	0.326	<0.001***
fast-food restaurants	0.199	0.001**
Self-supply:		
Meal preparation	-0.024	0.697

Source: Own calculations.

Table 4 shows the results of the linear correlations between the average household income per capita and the frequency of using gastronomic establishments outside the home and self-supply in the field of meal preparation. Spearman's rank correlation coefficient showed statistically significant, positive correlations between farm income and the frequency of using canteens, bars, cafes, restaurants, and fast-food restaurants outside the home. The higher the farm income, the more often these places are used outside the home.

Table 5. Linear correlations between the area of the farm and the frequency of using gastronomic establishments outside the home and self-supply in the field of meals preparation

Variables	Area of the farm	
	rho	p
Frequency of using gastronomic establishments outside the home:		
canteens	0.155	0.076
bars	0.179	0.040*
cafes	-0.130	0.138
restaurants	-0.004	0.965
fast-food restaurants	0.275	0.001**
Self-supply:		
Meals preparation	-0.101	0.250

Source: Own calculations.

Spearman's rank correlation coefficient showed statistically significant, positive correlations between the area of the farm and the frequency of using bars and fast-food restaurants outside the home (Table 5). Additionally, a positive tendency close to significance concerns the area of the farm and the frequency of using canteens.

Thus, the larger the area of the farm, the more frequent use of bars and fast-food restaurants out of the home (Table 6).

Table 6. Comparison of different types of farms in terms of the frequency of use outside the home of gastronomic establishment

Variables	Type of farm									The Kruskal–Wallis test by ranks	
	agricultural			mixed			non-agricultural			H	p
	M	Me	SD	M	Me	SD	M	Me	SD		
Frequency of using gastronomic establishment outside the home:											
canteens	2.29	2	1.58	2.58	2	1.42	3.28	4	1.79	14.193	0.001**
bars	2.21	2	1.17	2.44	2	1.23	2.80	2	1.60	5.532	0.063
cafes	2.03	2	1.08	2.39	2	1.04	2.87	3	1.29	22.806	<0.001***
restaurants	2.28	2	1.14	2.44	2	1.02	3.00	3	1.35	13.803	0.001**
fast-food restaurants	2.92	3	1.43	2.90	3	1.38	3.28	3	1.60	2.153	0.341
Self-supply:											
Meals preparation	3.32	4	0.94	3.34	4	0.89	3.12	3	0.94	3.000	0.223

Source: Own calculations.

The higher the mean and the median on a scale of 1-7, the more frequent use of gastronomic establishments outside the home. The higher the mean and median on a scale of 1-4, the more meals are prepared in terms of self-supply. The Kruskal–Wallis test by ranks showed that people from agricultural farms use canteens, cafes, and restaurants significantly less often than people from non-agricultural farms. Additionally, people from mixed farms (income from agriculture and other, non-agricultural sources) use cafes significantly more often than people from agricultural farms. Differences close to statistical significance occur in the case of bars.

5. Summary and Concluding Comments

The conducted research shows that the intensity of using nutrition in various types of gastronomic establishments by rural residents was varied. Eating meals in gastronomic establishments in the studied group was, in the case of almost all types of establishments, occasional. The most visited were restaurants, cafes, and bars. Fast-food restaurants were less frequently visited. The respondents used canteens much less frequently.

Statistical analysis showed that people from agricultural farms use canteens, cafes, and restaurants significantly less often than people from mixed farms. Additionally, people from mixed farms use cafes significantly more often than people from agricultural farms. This may be the result of the fact that people working outside agriculture are more active in social life and, working in the city, they have the opportunity to visit gastronomic establishments that are located near their place of work.

Another factor included in the analysis was the area of the farm. The larger the area of the farm, the more frequent use of bars and fast-food restaurants outside the home.

Income is an essential part of the standard of living. It enables the purchase of goods and services necessary to meet consumer needs, both lower and higher. The research confirmed that the higher the household income, the more frequent use of canteens, bars, cafes, restaurants, and fast-food restaurants out of the home.

The growing importance of gastronomic services is influenced by the increasing level of income of the population, the professional activation of women, and the greater role of free time. The development of gastronomic services has a significant impact on the style of running a household, eating style, and changes in the structure of activities performed during free time. Therefore, gastronomic services have a positive impact on the standard and quality of life.

However, there are differences in the frequency of using gastronomic establishments between rural and urban households. The limited availability of this type of service in the countryside forces visits to gastronomic establishments located in the city or larger towns. Moreover, in rural areas, eating habits may be associated with a strong relationship between production and consumption (natural consumption) in this group of households, which, coupled with the growing awareness of healthy and ecological nutrition, may not be conducive to using gastronomic services outside the home. A large percentage of the respondents declare that they prepare meals themselves at home, but also organize special events at home.

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