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## Servitization in the food behaviors of Polish consumers

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### Abstract

**Aim/purpose** – The main purpose of this research is to identify and characterize the phenomenon of servitization in the food behaviors of Polish consumers and the factors shaping it.

**Design/methodology/approach** – The empirical research was conducted on a sample of 660 respondents in the entire territory of Poland in 2018. The measurement tool in the primary research was a questionnaire. The collected data were analyzed using the multiple regression model, Cronbach's alpha coefficient, descriptive statistics, Student's t-test.

**Findings** – The results of the research confirm that the phenomenon of servitization is poorly visible in Polish consumers' food behaviors; however, it can be concluded that this trend is becoming increasingly more visible from year to year. It has been shown that servitization of food behaviors is particularly visible among young and well-educated men who assess their income situation as good or very good and live in urbanized areas.

**Research implications/limitations** – The research shows that the demand for catering services is growing and reveals who uses restaurants most often, which can be used by companies in this industry. The research is limited by the non-exhaustive character of the study, the questionnaire method, and household budget surveys as research tools, which are not without flaws, as well as time limitations.

**Originality/value/contribution** – The results suggest a number of points. First, the gradual convergence of Polish people's eating patterns with those of Western Europe in the use of catering services is shown. Second, the findings provide evidence of significant economic and socio-demographic differences regarding the use of food services among individuals. Third, they show the most important factors that shape the manifestation of servitization in consumers' food behaviors, which are income, gender, education, age, and location.

**Keywords:** servitization; food behavior; food-away-from home; out-of-home eating; home-delivered meals; catering companies.

**JEL Classification:** D12, D10, L83, M00.

## 1. Introduction

Food is an essential factor in the physical well-being and a primary source of stress, pleasure, and worry (Hanus, 2021, p. 347; Zalega, 2010). It is worth noting that the socio-cultural environment in which people function expands their dietary needs to include elements related to prestige or imitation. Therefore, food, besides satisfying hunger, affects many other needs such as a sense of belonging, safety or respect (Gutkowska & Ozimek, 2005; Hanus, 2021).

Consumers' food behavior is one of the forms of consumption behavior and refers to the attitudes and behaviors of individuals directly related to the satisfaction of dietary needs. Consumers' food behavior is associated with the choice of foods and meals, their purchase, planning, preparation, place, and time of their consumption, and people with whom they are usually consumed (Goryńska-Goldmann & Ratajczak, 2010; Hanus, 2021, p. 347).

The social, economic, and technological changes that have occurred over the last decade have significantly modified consumers' food behaviors (Sheth, 2021). These conditions favor the occurrence of new trends in consumers behaviors. One of these new trends is servitization (Fritze et al., 2018; Sobczyk, 2018).

The study of the development directions of the economies of developed and developing countries clearly reflects the trend toward increasing the role of the service sector (Jiechang, 2020; Khurramov, 2020). One of the key factors determining the development of the service sector is the demand structure resulting from current consumers behaviors (Skórska, 2016).

The phenomenon of servitization of consumption has been observed in Western countries for many years (Eurostat, 2019; Gutkowska & Piekut, 2016; Piekut & Valentukevičienė, 2019). The development of catering services has a significant impact on the style of running a household, nutrition, and changes

in the structure of leisure activities. Therefore, catering services have a positive impact on the level of life quality (Kolanowski, Trafialek, Drosinos, & Tzamalīs, 2020). Due to the process of globalization, resulting in the permeation of consumption patterns (Hanus, 2018; Robbins et al., 2010), it is worth considering whether servitization of consumption also manifests itself in the food behaviors of Polish people, which is the research problem of this paper.

Based on the results of the literature review, the general manifestation of servitization in consumers' food behaviors using direct surveys has not been the subject of a scientific study in the last decade. The previous studies have focused on chosen aspects of servitization, such as the frequency and factors that influence consumers eating-out (Fillmonau, Matute, Durydiwka, Faracik, Mika, & Zajadacz, 2018; Warde, Paddock, & Whillans, 2020) or food home-deliveries (Kopacki & Bogacka, 2020), as well as factors motivating the choice of a particular type of restaurant (Gogoi, 2020; Hełdak, Kurt Konakoğlu, Kurtyka-Marcak, Raszka, & Kurdoğlu, 2020; Shonkoff, Anzman-Frasca, Lynskey, Chan, Glenn, & Economos, 2018).

Therefore, to obtain a holistic view of the problem, the author decided to find the answer to two research questions: is the phenomenon of servitization manifested in Polish consumers' food behaviors? What kind of factors can influence the manifestation of servitization in consumers' food behaviors in Poland?

Thus, to advance the research on servitization in consumers' food behaviors in Poland, identification and characterization of servitization as a new trend in the food behaviors of Polish consumers, and the factors shaping it constitute the primary objective of the analysis undertaken in this paper. The results of the analysis considerably improve the understanding of the direction of food service development and its impact on other industry branches, e.g., logistics.

The paper is divided into the following sections. The first part presents the phenomenon of servitization in theory. The second is dedicated to the methodology and data collection, while the third shows the empirical results and discussion. The fourth contemplates the practical applications. The conclusion provides a summary and indicates applications of the work, limitations, and further research directions.

## **2. Literature review**

The term "service" is frequently used, however, it is very difficult to define it, as new forms of services are still continuously invented (Fusté-Forné & Jamal, 2021; Liu, 2021). A service can be defined as socially useful, where in-

tangible assets predominate and provide added value. Intangible elements are the main motives for a purchase by the recipient of the service (Szymańska, 2013, p. 24). Further, Tkaczyk, & Kołuda (2013) highlighted that the phenomenon of servicing consumption is connected with the reduction of consumption in the material sphere and its growth in the non-material sphere, which leads to an increase in purchases in the sphere of non-material goods and services. The increase in the share of the service sector in the creation of the national product is a feature of the economic development of moderately and highly developed countries. The importance of services in the household sector is also growing and, thus, the share of services in the sphere of consumption is increasing, leading to the transformation of industrial societies into service societies (Gospodina, 2021). Zalega (2010) noted that this phenomenon also manifests itself in the form of the substitutability and complementarity of many material goods and services, the deepening of the technical and social division of labor, as well as the constant humanization and intellectualization of life.

Today, servitization of consumption determines not only the standard of living but also the level and modernity of consumption, which manifest itself especially in a lot of new forms of services associated with a new technology, e.g., e-services in the public sector (Kuhlmann & Bogumil, 2021), drone food delivery services (Choe, Kim, & Hwang, 2021) or sharing economy services (Nakamura, Abe, & Mizunoya, 2021). Therefore, the development of the service sector in the broad sense is not only a consequence but, above all, a condition for rapid social and economic development (Gospodina, 2021).

Among the premises for servicing consumption in the economy, one may distinguish (Jiechang, 2020; Khurramov, 2020):

- social changes, e.g., higher standard of living of societies,
- increasing number of goods and services and their complementarity and substitution,
- the progress of civilization, particularly in relation to the growing importance of cultural and educational services,
- political and legal changes enabling the development of the service sector,
- aging of societies, influencing the creation of demand for health care, recreation, and educational services.

Based on the research conducted by Komor, Czernyszewicz, Białoskurski, Goliszek, Wróblewska, and Pawlak (2020) in the years 2008-2017, Poland has been experiencing significant demographic changes affecting global consumption and the quality of food demand. These are mainly: a decline in the total

population, a low fertility rate, delaying the establishment of families and the decision to have children, extending the life expectancy of the Polish population, and the progressive aging of the population. As a result, changes in the structure of households are affected, including a decline in the total number of persons in households, a decline in the average number of persons, and an increase in the number and share of one- and two-person households. A positive phenomenon observed in Poland was an increase in the level of education of the population, manifested by an increase in the percentage of people with higher education, while the share of people with the lowest level of education decreased. These changes have also resulted in an increase in the economic activity of the population. An increase in the wealth of Polish households has been noted. The real value of average disposable income per person in the household increased by 31.3% between 2008 and 2017, which resulted in an increase in real expenditure on consumer goods and services per person by 11.9%. The analysis showed that households in Poland in 2008-2017 experienced an increase in real disposable income per capita, an increase in the general demand of households, and a decrease in the share of food expenditure in the structure of total expenditure, which confirms the occurrence of regularities described by Engel's law (Komor et al., 2020).

The phenomenon of servicing consumption, i.e., the increased consumption of services is strongly connected with consumer demand structure. According to the assumption, as incomes rise, consumption and the share of spending on services grows faster than in relation to other goods, which is related to a higher income elasticity of demand for services compared to products (Fisher, 1939). This topic has received a great deal of attention in the literature, especially when examining the behavior of contemporary consumers (Piekut & Valentukevičienė, 2019; Abay et al., 2020, pp. 8-11).

Consumer behavior is the subject of research in several fields of science, particularly economics, sociology, psychology, anthropology, marketing, and management, which deal with various aspects of the purchase and consumption of goods and services (e.g., Chenarides, Grebitus, Lusk, & Printezis, 2021; Finaritra & Benjamin, 2021). Particularly interesting are consumer activities related to the acquisition and use of products to meet their needs under the influence of economic and social conditions, both externally and internally (e.g., Boca, 2021; Nguyen, Nguyen, & Tran, 2021). Furthermore, research in the area of consumer food behavior is very often presented. Studies are focused on food waste behavior or eco-friendly food behavior (Nam, 2020), consumers attitude

toward different kinds of food or restaurants (Fernández-Ferrín, Calvo-Turrientes, Bande, Artaraz-Miñón, & Galán-Ladero, 2018; Feil, 2020), as well as the physical appearance of food and its impact on consumer food behavior (Spence, 2018).

Servitization of consumers' food behaviors is also widely supported in the literature, especially in the context of eating out and factors that influence consumer behavior in this area (Díaz-Méndez & van den Broek, 2017; Fillmonau et al., 2018; Warde et al., 2020). Eating out is becoming increasingly popular all over the world, significantly influencing the structure of household spending. This trend can be particularly noticed in China, France, the United States, the Netherlands, Great Britain, and Norway. In the UK, expenditure on servicing food consumption is more than a quarter (26%) of total spending on soft drinks and food in household budgets (Adams, Goffe, Brown, Lake, Summerbell, White, & Adamson, 2015). In addition, Piekut & Valentukevičienė (2019) noticed that from five distinguished groups, with respect to the level and percentage of money share allocated to foodservices in total annual expenditure in 2012-2016, Poland was among the countries with the lowest values.

Researchers also describe consumer behavior regarding food home-deliveries, focusing especially on consumer preferences based on their sociodemographic characteristics (Kopacki & Bogacka, 2020; Woźniczko & Orłowski, 2020). Woźniczko & Orłowski noticed that the HoReCa (Hotel, Restaurant, and Catering) market underwent very rapid changes in the years 2009-2019. The changes were primarily due to the changing lifestyles of Polish people, which increasingly mirrored the lifestyle of residents of Western Europe. Hence, the demand for the use of complementary services provided by catering facilities such as catering (especially for companies, institutions, offices), the organization of events such as baptisms, communions, birthdays, takeaway and ordering via the internet, including reservations. However, during the last year, the most important problem presented in the literature has been the influence of COVID-19 pandemic on home delivery meals because of the ban on eating out in restaurants (Grochowicz, 2020; Unnikrishnan & Figliozzi, 2020). Grochowicz (2020) observed that during the pandemic, Polish consumers chose take-away meals from restaurants they know and want to support in some way during the difficult times.

Catering services are among the most dynamically developing forms of service activity (Woźniczko & Orłowski, 2020). There are more and more different kinds of restaurants, such as fast food bars, local restaurants with a traditional menu, restaurants with an international cuisine or specializing in healthy dishes.

They are created in response to consumer demands and needs, which are often researched by the scientists and presented in the literature (Gogoi, 2020; Heldak et al., 2020; Kolanowski et al., 2020). Kolanowski et al. (2020) found that Polish young adults eat most often at restaurants (53%), local bars (40.5%), pizzerias (30.8%), kebab bars (29%), fast food chain outlets and sushi bars (both 24%), burger bars (11%), mobile food stalls (11%), and food booths (7%).

The literature distinguishes macro- and microeconomic factors among the typical conditions for the development of the phenomenon of the servitization of food behavior. The first group of factors is related to the structure of the national economy, and in particular GDP per capita, which affects consumer income. The second group mainly refers to income and household expenditure, including food, as well as social, cultural or demographic conditions, and changes in the lifestyle and organization (Kolanowski et al., 2020; Levytska & Kowrygo, 2007; Piekut & Valentukevičienė, 2019).

Income is pointed by many authors as one of the most important factors affecting consumer behaviors associated with services (Gutkowska & Piekut, 2016; Kolanowski et al., 2020; Levytska & Kowrygo, 2007; Piekut & Valentukevičienė, 2019). Moreover, the place of residence is indicated as a factor strongly affecting the frequency of eating out or ordering take-away food (Hawkes, Harris, & Gillespie, 2017; Kwiatkowska, 2009; Wołoszyn et al., 2018). Therefore, based on the literature review, these two factors are chosen as the important ones for the analysis in this study.

It should be noted that the use of catering services by consumers is becoming more common than it was a dozen or so years ago. Not only are these services associated with the need to satisfy nutritional requirements, but also increasingly often with the need to satisfy such higher needs as: social coexistence, belonging to a given group, prestige, self-development or pleasure (Kwiatkowska, 2009).

As it can be noticed, the previous studies have focused on chosen aspects of servitization, such as the frequency and factors that influence consumers eating-out, food home-deliveries, factors motivating the choice of a particular type of restaurant, as well as consumers' demand for different kinds of restaurants.

Therefore, the main contribution of this research is to fill the research gap identified in the literature related to the general manifestation of servitization in consumers' food behaviors using direct surveys. Based on the literature review, two hypotheses were proposed:

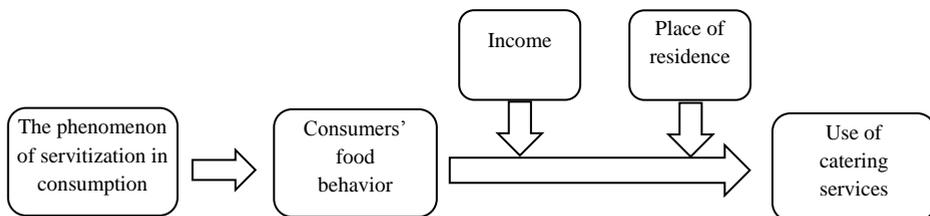
H1: The phenomenon of servitization is poorly manifested in Polish consumers' food behaviors.

H2: Income and place of residence are important determinants influencing the manifestation of servitization in Polish consumers' food behaviors.

### 3. Research methodology

The main objective of the study was to examine whether servitization in the food behaviors of Polish consumers can be treated as a new trend, and what factors shape the manifestation of servitization in this area. The conceptual model presents which variables were needed to achieve this objective (Figure 1).

**Figure 1.** The conceptual model of the research



Source: Author's own study.

The choice of variables results from the literature review, which indicated the currently growing role of services in the economies (Jiechang, 2020; Khurramov, 2020). It was also pointed out that the phenomenon of servitization permeates various spheres of human activity, such as nutrition, which manifests itself primarily in the use of food services. However, these behaviors are shaped and depend on some economic or demographic factors (Figure 1).

The data were collected through the analysis of household budgets and through direct surveys using quantitative methods. That approach was chosen based on its frequent use in studies with similar topics (e.g., Levytska & Kowrygo, 2007; Filimonau, Matute, Durydiwka, Faracik, Mika, & Zajadacz, 2018).

In the analysis of household budgets, the author focused on comparing the share of expenditure on selected services in the structure of Polish household expenditures for the years 2010-2018.

Direct research using quantitative methods involved individual consumers making their own dietary choices (over 18 years of age). The research was conducted throughout Poland in 2018.

The choice of the research method, the selection of the sample, as well as the method of analyzing the collected information were determined by the objectives and scope of direct research. Taking into consideration the advantages and the limitations of each research method, as well as the need to collect up-to-date and complete information on new trends in consumer dietary behaviors, two research techniques were used in the direct research: an online survey and a distributed survey. The first technique collected completed questionnaires from “internet-active” individuals. For this method, the internet survey application called “Survio” was used. The link with the questionnaire was distributed through Social Media and email addresses, using snowball sampling methods. The second technique, which was complementary in nature, was used to collect questionnaires from “internet inactive” individuals (e.g., older people or people from non-urban areas). Respondents were selected at random by the author.

In the direct surveys, the measuring tool was a questionnaire. It was prepared on the basis of literature review as it was presented in the previous section of this paper. It consisted of a short introduction, instructions for the respondents, ten relevant questions, and five background-data questions. The survey questionnaire is in Appendix. It should be noted that this paper analyzes only selected questions (9a, b, c, d, e, f) presented in Table 2.

Prior to the primary research, a pilot study was conducted on a sample of 50 individual consumers, which provided valuable organizational and substantive data. It was noted that people over the age of 60 were not willing to complete the online survey at all. Additionally, the completion time was much shorter than anticipated, and one of the questions was clearly difficult to answer. Consumers also missed a question delineating between those who do their food shopping and those for whom someone else does it, which affected further responses. After a careful analysis, necessary changes were made to the questionnaire.

Due to the fact that the conducted research is classified as a non-exhaustive research, the selection of individuals for the sample was of great importance. Purposive-quota sampling was used in the study, with quotas determined based on age and gender criteria. It should be noted that despite the use of a distributed questionnaire as a tool to improve representativeness, there were still some deviations in the sample structure from the target structure. Hence, weighting of observations was used in the calculations to guarantee the representativeness of the results in these two analyzed dimensions.

The data collected during face-to-face surveys using the online survey technique were controlled to determine what percentage of respondents completed the survey, what percentage started to complete it but did not finish, and what percentage only opened the survey. In contrast, surveys using the distributed survey method were first counted, then audited, and then the results of surveys gathered using the online survey technique were summed. The audit allowed the detection of incomplete questionnaires and errors related to inaccurate records. These activities increased the reliability of the data and enhanced their usefulness for further analyses. For detailed analyses, 660 responses were admitted, noting that those who marked “no” in question 2 of the questionnaire did not answer questions 3-5 (a total of 23 people, representing 3% of the study population). Therefore, correlation analyses were conducted on a sample of 637 questionnaires against which observations were weighted. However, the analysis of the response structure includes all respondents.

The direct surveys included 393 women (59.5%) and 267 men (40.5%). Those aged 18-34 accounted for about 42% of the respondents, those aged 35-54 – for 28%, and people over 55-31% of the respondents. The sample structure in terms of gender and age resulted from the quota selection, which reflected the structure of the population in Poland as of December 31, 2016. Due to the over-representativeness of some groups of respondents, the observations were weighted. As a result, the population structure can be considered sufficiently representative, although the use of purposive selection makes the use of statistical methods for estimating representativeness impossible. Data concerning the population structure in terms of the selected criteria and the share of particular groups in the planned and actually obtained sample are presented in Table 1.

**Table 1.** Characteristics of consumers participating in the survey (n = 660)

Characteristics of respondents	Respondents	
	Number	%
<i>1</i>	<i>2</i>	<i>3</i>
<b>Gender</b>		
Female	393	59.50%
Male	267	40.50%
<b>Age</b>		
18-24	103	15.6%
25-34	166	25.2%
35-44	102	15.5%
45-54	84	12.7%
55-59	50	7.6%
60-64	50	7.6%
65 years and above	105	15.9%

**Table 1 cont.**

<i>1</i>	<i>2</i>	<i>3</i>
<b>Education</b>		
Elementary	6	0.9%
Lower secondary	9	1.4%
Vocational	233	35.3%
Secondary	327	49.5%
Higher	85	12.9%
<b>Income situation</b>		
Very bad	13	2.0%
Bad	8	1.2%
Average	104	15.8%
Okay	235	35.6%
Very good	300	45.5%
<b>Place of residence</b>		
City	407	61.7%
Village	253	38.3%

Source: Author's own study based on primary research results.

Among other adopted characteristics of the research sample were: education, income situation, and place of residence. Almost half of the respondents had secondary education (49.5%), more than 1/3 had vocational education (35.3%), and one in seven had higher education. Only 2.3% of respondents declared elementary or lower secondary education (Table 1).

It should be noted that the questionnaire was prepared to research the manifestation of few different new trends in consumers' food behaviors.<sup>1</sup> For this purpose, variables (questionnaire' questions) were operationalized and analyzed using measurement scales. To examine the manifestations of servitization in the food behaviors of Polish consumers, the questionnaire asked the respondents questions related to the frequency of food consumption outside home in general, specifying various cuisines, as well as ordering meals with home delivery (questions are presented in Table 2). It should be noted that the research showed that the construction of the measurement scale, i.e., the average of all questions, is justified. This is confirmed by the Cronbach's alpha score of 0.8, which indicates high reliability of the selected scales (Table 2). The descriptive statistics were used to determine the level of servitization (Table 3). The method used made it possible to find the answer to the question whether the phenomenon of servitization manifested in Polish consumers' food behaviors.

<sup>1</sup> For example, rationalization, ecologization, cocooning, globalization, ethnocentrism.

**Table 2.** Operationalization and measurement of variables

Studied phenomenon	Scale position (questions)	Cronbach's alpha for the scale	The literature evidence
Servitization	Eating the main hot meal outside the house	Alpha = 0.8**	Warde et al. (2020); Fillmonau et al. (2018); Díaz-Méndez & van den Broek (2017)
	Eating at fast food bars, e.g., McDonald's, KFC		Gogoi (2020); Hanus (2017)
	Eating at local restaurants with a typical Polish menu		Hanus (2017); Heldak et al. (2020); Fernández-Ferrín et al. (2018); Contini, Romano, Boncinelli, Scozzafava, & Casini (2017)
	Eating at restaurants with an international cuisine		Hanus (2018); Faracik et al. (2018); Tharavath, Gupta, & Gunasekar (2017)
	Eating at restaurants specializing in healthy dishes		Filimonau et al. (2018); Shonkoff et al. (2018)
	Ordering meals with home delivery		Unnikrishnan & Figliozzi (2020); Kopacki & Bogacka (2020)

Source: Author's own study based on primary research results.

To achieve the second part of the main aim of this paper associated with factors shaping consumers' food behaviors with respect to servitization, the multiple regression model was used. In addition, some descriptive statistics were determined. To test the significance of the regression model parameters, Student's t-test using heteroscedasticity consistent standard errors of the estimated coefficients was used. These statistical methods also made it possible to find the answer to the research question who uses the restaurant services most often.

It should be noted that since it is not possible to guarantee the independence of the answers provided by the respondents in the online survey, the results of testing the significance of the regression model parameters should be treated with some caution.

#### 4. Research findings

The average respondent rating is 1.71, the median is 1.67, and the standard deviation is 0.57, which on a five-point scale is a very low result (Table 3).

**Table 3.** Descriptive statistics for the phenomenon of servitization in the food behaviors of Polish consumers\*

Phenomenon	Average	Median	Standard deviation
Servitization	1.71	1.67	0.57

\* In the questions, intensity scales from 1 to 5 were used, and the ends of these scales were described differently depending on the question asked.

Source: Author’s own calculations based on primary research results.

The results presented in Table 3 are an answer to the research question: is the phenomenon of servitization manifested in Polish consumers’ food behaviors? As the research results show, the phenomenon of servitization is poorly manifested in Polish consumers’ food behaviors, which confirms the first hypothesis.

However, on the basis of Statistical Yearbooks, Household Budget Studies (GUS, 2007, 2016), it can be concluded that this trend in consumers’ food behaviors is becoming increasingly visible from year to year. In 2010, the share of expenditure on catering and hotels over the total household expenditure per person was 2.3% (amounting to PLN 22.93 per person). In 2018, this increased to 5.0% (PLN 58.90 per person). Compared to the share of expenditure on other chosen types of services, a systematic increase can be observed only in this case. It should also be noted that in the case of catering and restaurants, the difference in the share of expenditure between 2010 and 2018 is the highest. Table 4 presents the share of expenditure on selected services in the structure of Polish household expenditure for the years 2010-2018.

**Table 4.** Share of expenditure on selected services in the structure of Polish household expenditure for the years 2010-2018

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Expenditure – grant total 100%									
including expenses for services (%):									
Transport	9.6	9.6	9.8	9.5	9.2	8.8	8.7	8.7	10.4
Communication	4.4	4.2	4.0	5.1	5.0	5.0	5.0	4.7	4.0
Recreation and culture	7.5	7.6	7.6	6.4	6.5	6.7	6.9	7.0	6.5
Education	1.3	1.2	1.2	1.2	1.1	1.0	0.9	1.0	1.0
Restaurants and hotels	2.3	2.4	2.8	2.9	4.2	4.2	4.4	4.6	5.0

Source: Author’s own study based on research on household budgets (GUS, 2011-2019).

The results of the estimation of multiple regression models for servitization make it possible to find the answer to the research question associated with the characteristics of users of restaurant services in Poland. Moreover, they indicate the most important factors shaping the consumers' behaviors. The study found that women manifest the phenomenon of servitization in their food behaviors on average 0.2 lower than men. Those aged 25-34 (an average of 0.15 less than those aged 18-24), 35-44 (an average of 0.264 less than those aged 18-24), 45-54 (an average of 0.382 less than those aged 18-24), 55-59 (an average of 0.543 less than those aged 18-24), 60-64 (an average of 0.661 less than those aged 18-24), and 65 and over (an average of 0.821 less than those aged 18-24) also showed lower levels of servitization. In contrast, those with secondary and higher education manifest higher levels of servitization in their eating behaviors than those with vocational education (those with secondary education averaged 0.149 higher and those with higher education averaged 0.161 higher). Furthermore, respondents who report a good or very good income situation have a level of servitization higher than those with an average situation (by 0.079 and 0.332 respectively). Moreover, respondents residing in the city also declare a level of servitization on average by 0.089 higher than those in rural areas (Table 5). The results allow for the confirmation of the second hypothesis, according to which income and place of residence are significant factors influencing the manifestations of servitization in the eating behaviors of Polish consumers.

**Table 5.** Results of estimation of multiple regression models for servitization

Variables	Servitization	
	b	std(b)
<i>I</i>	2	3
According to the "you are what you eat" principle, do you pay attention to what food products you choose?_yes	0.037	0.067
What does packaging mean to you when choosing a food product?	0.023	0.018
What does price mean to you when choosing a food product?	-0.042	0.029
What does the company mean to you when choosing a food product?	0.007	0.020
What does quality mean to you when choosing a food product?	-0.028	0.037
What does calorie content mean to you when choosing a food product?	-0.003	0.024
What does composition mean to you when choosing a food product?	0.000	0.028
Do you think you are eating healthily?_yes	-0.083	0.048*
Do you use any diet (e.g., vegetable and fruit)?	0.098	0.052*
Do you broaden your knowledge of proper nutrition?	0.004	0.050
Do you use dietary supplements advertised in the media?	-0.004	0.064
sex_female	-0.200	0.044***

**Table 5 cont.**

	1	2	3
age_25_34		-0.150	0.060**
age_35_44		-0.264	0.071***
age_45_54		-0.382	0.071***
age_55_59		-0.543	0.082***
age_60_64		-0.661	0.080***
age_65_and_above		-0.821	0.063***
elementary education		-0.132	0.195
lower secondary education		-0.001	0.151
secondary education		0.149	0.059**
higher education		0.161	0.063**
very poor income situation		0.185	0.369
bad income situation		0.292	0.334
good income situation		0.079	0.038**
very good income situation		0.332	0.078***
place of residence_city		0.089	0.045*
_cons		2.142	0.151***
R <sup>2</sup>		0.42	
N		637	

Note: Column b provides estimates of regression coefficients; column std (b) contains the average parameter estimation errors calculated using a formula resistant to random component heteroscedasticity; statistically significant estimates are marked with stars: \* p < 0.1; \*\* p < 0.05; \*\*\* p < 0.01.

Source: Author’s own study based on the results of primary research.

## 5. Discussion

Across the studies covered by this paper, it is indicated that Polish consumers poorly manifest the trend phenomenon of servitization in their food behaviors. Spending on restaurant services still represents a negligible percentage in the spending structure of Polish people compared to other EU residents, especially those in Western and Northern Europe. In 2018, the highest spending on gastronomy, hotels, and catering services was recorded for households in Malta (33.6%), Ireland (31.1%), Spain (27.6%), and Cyprus (25.9%). On average, the expenditure amounted to 25.7% in EU countries and 6.6% in Polish households, which was the second lowest result in the EU. The lowest was recorded in Serbia (2.4%, Eurostat, 2019). The results are in line with findings of other studies. Comparing the food behaviors of Polish people and the English, Zabrocki and Cordice (2010) noted that English people use their food services on average

twice as often as Polish people do. This is due to the fact that Polish people are unaccustomed to using such services, but most of all due to financial limitations. A Polish consumer spends no more than 10% of their spending on food services (6-7% on average), while an English consumer spends 25% or more. Moreover, the consumer assessment of the level of service quality in both countries has shown a much greater satisfaction in this respect among the English consumers. In Poland, only 5% of respondents considered the quality of food services offered to be high and 53% considered them to be very diverse.

However, on the basis of Statistical Yearbooks, Household Budget Studies (GUS, 2007, 2016), a relatively large increase in spending on gastronomy can be observed. It was indicated that the dynamic development of the service sector is mainly associated with a change in the lifestyle of Polish consumers, who are increasingly eager to shop for groceries online, eat out or order ready-made meals, as observed for years in Western European countries (Kolanowski et al., 2020; Zalega, 2010; Piekut & Valentukevičienė, 2019).

The results clearly show what kind of factors can influence the manifestation of servitization of consumers' food behaviors in Poland. It should be noted that catering services are higher-order needs, and their use can be expected in households with a more favorable financial situation. While it is indicated that expenditure on catering services depends on many of the variables that characterize households, disposable income per person is one of the strongest determinants for the use of such services (Gutkowska & Piekut, 2016; Piekut & Valentukevičienė, 2019). Direct studies (Table 5) confirmed that respondents who declare a good or very good income situation also manifest the food behaviors associated with servitization more often than people with an average situation (0.079 and 0.332). Moreover, research by Liu, Wahl, Seale, and Bai (2015) or Venn, Dixon, Banwell, and Strazdins (2018) confirmed that people with higher income are more likely to eat away from home.

Consumer behavior is also influenced by the socio-demographic characteristics of households. For example, the level of education proved to be a relatively strong determinant of expenditure on catering. Direct studies (Table 5) indicated that people with secondary and higher education demonstrate a higher manifestation of the food behaviors associated with servitization than people with vocational education (with secondary education on average 0.149 higher, and with higher education on average 0.161 higher). Gutkowska and Piekut (2016) showed statistically significant differences between all types of households distinguished by the level of education of the head of the household and

expenditure on catering. Expenditure on catering services in households represented by persons with the highest secondary education level amounted to PLN 13 per person, which constituted 1.7% of total expenditure. In households with a higher level of education of the head of the household, the expenditure amounted to over PLN 55 per person, and in the structure of expenditure, 3.5% of total expenditure, i.e., expenditure on catering services in households run by persons with higher education were 4.2 times higher than in households represented by persons of a secondary education level (Gutkowska & Piekut, 2016). An increase in expenditure on catering services along with an increase in the level of education is observed in other studies, for example Binkley (2006), Venn et al. (2018), and Wołoszyn et al. (2018).

Another significant determinant influencing consumer behavior and the consumer behavior associated with servitization is gender. The direct research showed that women manifest the phenomenon of servitization in their food behaviors on average 0.2 lower than men (Table 5), which is in line with research by Binkley (2006) or Angulo, Gil Roig, and Mur (2007).

It should be noted that age also has an important impact on consumer behavior. The phenomenon of servitization in the food behavior is less frequently found in people aged 25-34 (on average 0.15 less than persons aged 18-24), 35-44 (on average 0.264 less than persons aged 18-24), 45-54 (on average 0.382 less than persons aged 18-24), 55-59 (on average 0.543 less than persons aged 18-24), 60-64 (on average 0.661 less than persons aged 18-24), and 65, and above (on average 0.821 less than persons aged 18-24) (Table 5). These results are consistent with other authors. For example, Angulo et al. (2007) noticed that, regarding age, people younger than 55 are more likely to purchase food away from home. Binkley (2006), however, found that age has a negative effect on eating out; whereas, it is particularly highly significant for fast food. Wołoszyn et al. (2018) noticed that households managed by young people are more likely to eat out, use out-of-home accommodation, and spend on average higher amounts on food outside home.

It is also indicated that location can influence the frequency of eating out or ordering take-away food (Hawkes et al., 2017; Wołoszyn et al., 2018). Direct studies showed that for respondents living in the city this is higher by 0.089 on average than for people from rural areas (Table 5). Research by Kwiatkowska (2009) confirmed the results of direct studies. She noted that respondents living in Warsaw were statistically significantly more likely to use restaurant services than those living in rural areas. Nearly three times as many residents of Warsaw

(12.03%), compared to residents of cities in the Warsaw agglomeration (4.81%) and rural areas (3.33%), used restaurants several times a week. Furthermore, Wołoszyn et al. (2018) found that the level and frequency of expenditure on catering and hotel services were the lowest in rural households, and the highest in households of large cities. The change dynamics of this phenomenon in rural households over the period in question, however, was one of the highest in the case of expenditure on catering services and the highest in the case of expenditure on hotels.

## **6. Practical implications**

As direct studies showed, Polish respondents spend increasingly more on catering, which contributes to an increase in the number of gastronomic enterprises, changes in their generic structure, and an increase in income from this type of activity. Thus, the value of the gastronomy market is growing, and at the same time, with a great variety of restaurant and distribution concepts, customer expectations are increasing. Today, other than satiating hunger, food meets many other consumer needs. It is observed that consumers increasingly visit food and beverage outlets for entertainment and socializing purposes; thus, it is important to remember that, in addition to an appropriate menu, the atmosphere, and visual qualities of a place perform an important role. Moreover, catering zones in shopping centers are expanding. Malls are no longer just places for a quick meal between shopping, but become a space for social meetings. Hence, on the Polish market, there are already some changes in the arrangement of gastronomic premises and attempts are made to adapt them to the surroundings. In restaurants, it is becoming increasingly common to have separate order placement areas, the so-called open kitchens, where guests can see how their meal is prepared, original and comfortable interior design or even the availability of board games. All of the above encourages customers to meet with their loved ones for a longer period of time and create positive experiences with the brand. Moreover, popular culinary TV programs, and numerous food festivals and fairs have increased interest in culinary trends, and have created a need for consumers to experiment with and satisfy the emotional aspect of nutrition. In response to these needs, unconventional restaurants have appeared on the market (e.g., dark restaurants).

The results of the studies can also have a significant impact on the Polish e-grocery market. Nowadays, in Poland, sales of food products via the internet on the FMCG market are very low, but the development potential is very high. It

can be assumed that, among other things, a better financial situation, demographic considerations, and a ban on trade on Sundays will contribute to raising these statistics. At the moment, among other things, discounters are beginning to install parcel machines for storing food, which keep the temperature low. A growing number of grocery stores offers the option of online buying. The development of this market largely depends on how the products will be delivered and on the quality of cooperation between the grocery store and the logistics operator, as well as the end customer and the grocery store. Stolecka-Makowska (2018) noticed that in the case of such a sensitive segment of e-buyers as consumers buying food on the internet, sellers wishing to build trust in online purchases must concentrate their activities on the range of products on offer and making delivery services more flexible. The entities operating in this sector should also implement technological innovations that facilitate this type of purchases. Research showed that an increasing percentage of e-consumers expect that e-shops will have a mobile version, enabling them to make purchases in a convenient place and at a convenient time without problems.

Ordering food online with home delivery is also becoming important. Increasingly more consumers appreciate the option to order a dish with home delivery. In response to this demand, many restaurants work with food ordering portals. The most popular of these are *PizzaPortal.pl* (Glovo), *Pyszne.pl*, *Uber Eats*, and *Wolt*, which, apart from handling orders, also enable delivery. Polish people have access to an increasingly wide range of gastronomical offers, which reach them at a short time. Restaurant owners gain a new customer base and enter into cooperation with external companies organizing the delivery of orders. It should be noted, however, that cooperation between restaurants and popular portals can also have negative side effects. Other than being costly (commissions), this may also have a negative impact on the image of the restaurant. The food order applications strive to unify images and limit the information provided to the bare minimum. For this reason, restaurants lose their identity. They are not able to stand out, and encourage consumers with their unique atmosphere or interesting decoration. At the same time, the brand of the company through which their food is ordered is strengthened in the consciousness of the customer. Therefore, a growing number of restaurant owners treat this cooperation only as an addition to their daily activities. Many of them create applications dedicated to their premises, combined with their own delivery system. Using these applications, customers can order food in a convenient way, while the restaurant has full control over delivery and profits. Moreover, the restaurant can use a loyalty system and interesting promotions (Gupta, 2019).

## 7. Conclusions

The main aim of this study was to identify and characterize servitization as a new trend in the food behaviors of Polish consumers and the factors shaping it. The obtained results are quite consistent with the expected behaviors of Polish consumers and provide a clear picture of the manifestation of servitization in consumers' food behaviors. This pattern will be of great interest to all economic agents involved in this growing sector.

Results suggest a number of points. First presented should be a comment regarding gradual convergence of Polish people eating patterns with those of Western Europe in the use of catering services. Across the studies covered by this paper, it was found that the phenomenon of servitization is not prominent in Poland, which is consistent with the first hypothesis of the paper. However, on the basis of Statistical Yearbooks, Household Budget Surveys, as well as studies by other authors, it can be surmised that this trend is becoming increasingly visible from year to year.

Results also provide evidence of significant differences in regard with using food services among individuals. In general, servitization of the food behavior is particularly prominent among young, well-educated men, assessing their income situation as good or very good and who live in urbanized areas.

Moreover, direct research shows the most important factors shaping the manifestation of servitization in consumers' food behaviors, which are income, gender, education, age, and location. These results support the second hypothesis of the paper.

From a practical point of view, this paper shows that due to more frequent use of food services by consumers, the rapid development of the market for catering services and e-groceries can be expected. Efficient logistics and innovative solutions, which would facilitate this type of purchases, perform a fundamental role in their development. Moreover, it should be noted that contemporary consumers look for new taste sensations and aesthetic experiences, visiting restaurants not only to eat but also for social or entertainment reasons; therefore, it is extremely important to have an original and comfortable interior design and offer additional facilities that would attract customers.

The results of this study are subject to some limitations. First, the research was non-exhaustive, therefore, its generalization to the entire population may be treated as a certain limitation. Second, the questionnaire method and household budget surveys as research tools are not without drawbacks, such as their super-

ficiality and limited possibility of deepening the subject. Third, time limitations. The survey was conducted in 2018, and due to the COVID-19 pandemic and the reduction of restaurant operations, consumers' eating behaviors related to servitization may have changed rapidly and significantly. However, this research can be viewed as a baseline for similar research conducted after the pandemic has ceased. In addition, the Household Budget Surveys did not overlap in time with the face-to-face surveys due to the timing of the publication of the Household Budget Surveys. However, in the author's opinion, the surveys complemented each other perfectly and made the results more reliable. An important limitation of the work is also the fact that the results are not universally applicable in any country.

Future studies can be associated with the typology of consumers using food services, customers' expectations and satisfaction with restaurant offers or online food ordering portals, as well as the performance of online food delivery companies in Poland. Moreover, it may be worth examining the consumers' food behaviors associated with the phenomenon of servitization after the coronavirus pandemic has ceased.

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## Appendix

### QUESTIONNAIRE

*Dear Sir or Madam!*

*I am a doctoral student at the University of Economics in Katowice and I am conducting scientific research as a part of my doctoral thesis titled “New trends in food consumption and nutritional behavior of Poles”. I would like to ask you to help me in my research by filling in the following questionnaire. The questionnaire is anonymous, and its results will be used solely for scientific purposes in the form of collective summaries. It will take no more than 10 minutes to complete.*

*Please mark your choice with an X.*

**1. In line with the principle “you are what you eat”, do you pay attention to what foods you choose?**

- 1. Yes
- 2. No

**2. Do you ever go grocery shopping?**

- 1. Yes
- 2. No → *please go to question 6*

**3. What is the importance of the following factors to you when choosing a food product?**

	1	2	3	4	5
	Not important	Rather not important	Difficult to say	Important	Very important
a) the packaging					
b) the price					
c) the company					
d) the quality					
e) caloric value					
d) the composition					

#### 4. Please specify how do often you buy:

	1	2	3	4	5
	Never	Occasionally, in case of an emer- gency	Several times a year	Several times a month	Several times a week
a) fast food, such as French fries, hamburgers, pizza, hot dogs, and casseroles					
b) convenience foods, e.g., soup, sauce or dessert concentrates, breakfast cereals, frozen flour, vegetable, fish or meat dishes					
c) functional foods, e.g., probiotic yogurt, fortified products, vegetables and fruits with proven health benefits					
d) traditional foods, e.g., oscypek, necowka, small cakes from Cieszyn					
e) food labelled as organic, healthy					
f) food produced in Poland or by a local supplier					
g) food at international commercial chains, e.g. supermarkets Auchan, Tesco, Carrefour					
h) food via the internet					

#### 5. How well do the following statements match your behavior?

Scale from 1 to 5, where 1 means – does not fit at all, and 5 – fits very well

	Assessment
a) I always check the expiration date of the food I buy	
b) I try to choose products produced by Polish food producers	
c) Most of the food I buy comes from a reliable source (mainly meat and meat products), e.g., a local farmer	
d) I prefer to shop in small local grocery stores rather than large supermarkets	
e) I am interested in new trends in nutrition, introducing trendy products into my daily diet and looking for new ways to cook	

#### 6. Do you think you eat healthy?

1. Yes

2. No

**7. How would you rate your diet in terms of the characteristics listed?**

Scale from 1 to 5, where 1 means – does not fit at all, and 5 – fits very well

	Assessment
a) My meals are very varied	
b) Low-processed foods predominate in my diet	
c) Organic food predominates in my diet	
d) I eat a large number of meals in a day (3-5 or more)	
e) I eat at regular times	
f) I eat low-calorie meals	
g) I will eat food rich in nutrients	

**8. Please indicate how often do you:**

	5	4	3	2	1
	Every day	Several times a week	Several times a month	Once a month or less	Not at all or hardly at all
a) eat a warm meal during the day, e.g., dinner, lunch					
b) eat breakfast in the morning					
c) eat fruit and vegetables in the recommended amount of 5 portions each day					
d) eat crisps, chips, sweets, etc., between meals					
e) drink sweetened sodas such as coca-cola, fanta, mirinda, etc.					

**9. Please indicate how often do you:**

	5	4	3	2	1
	Every day	Several times a week	Several times a month	Once a month or less	Not at all
a) eat your main hot meal away from home					
b) eat at fast food bars like McDonald's, KFC					
c) eat at local restaurants with a typically Polish menu					
d) eat at restaurants with an international cuisine (e.g., Chinese, Italian, Mexican)					
e) eat at restaurants specializing in healthy dishes (e.g., vegetarian, vegan, organic, lactose-free)					
f) order meals for home delivery, e.g., from pizzerias and other catering undertakings					
g) choose to cook elaborate dishes at home rather than visit a restaurant					

**10. In the past year, have you:**

	<i>1</i>	<i>2</i>
	<i>Yes</i>	<i>No</i>
a) followed a nutritional diet (such as fruit and vegetables)?		
b) increased your knowledge about good nutrition?		
c) taken any dietary supplements advertised in the media?		

**Metrics****Gender:**

1. Female  
 2. Male

**Age:**

1. 18-24  
 2. 25-34  
 3. 35-44  
 4. 45-54  
 5. 55-59  
 6. 60-64  
 7. 65 and more

**Education:**

1. Elementary  
 2. Lower secondary  
 3. Vocational  
 4. Secondary  
 5. Higher

**An assessment of you household income situation:**

1. Very bad  
 2. Poor  
 3. Average  
 4. Good  
 5. Very good

**Place of residence:**

1. City  
 2. Village