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Consumer Attitudes and Purchase Intentions for Antibiotic-Free Pork in Poland: An Empirical Study

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Magdalena Kozera-Kowalska[1], Jarosław Uglis[2]

Abstract:

Purpose: *The purpose of this paper is to present the research findings on consumer preferences for purchasing pork labelled "raised without antibiotics." Therefore, a study was conducted in order to: (1) investigate the way consumers view pork labelled "raised without antibiotics," (2) explore the differences in socio-demographic factors which affect the way it is perceived, (3) determine the consumers' willingness to purchase pork labelled "raised without antibiotics" and the factors affecting their purchasing decisions, (4) make an attempt to determine the profile of consumers who prefer pork labelled "raised without antibiotics."*

Design/Methodology/Approach: *The factual material covered by the study was collected through a survey questionnaire administered to a sample of 1177 Polish residents. The analysis included the consumers' socio-demographic characteristics and preference for pork labelled "raised without antibiotics." The study relied on the classification tree method, including the CHAID modeling technique.*

Findings: *The study found that the consumer group who prefer meat labelled "raised without antibiotics" consists of women and people aged over 45. More than three-quarters of consumers would willingly buy it despite realizing that it costs more than available unlabelled pork products. Also, the respondents are inclined to pay more for pork raised without antibiotics, as more than half of them would accept a 10% to 20% surcharge over products not labelled this way.*

Practical implications: *Faced with a growing number of health risks, including the presence of antibiotic residues in pork, both its consumers and its producers look for solutions to adequately address these issues. This includes producing pork in a non-antibiotic approach, on the one hand, and selling pork labelled "raised without antibiotics," on the other. For many increasingly informed consumers, the above is an important driver of their purchasing preferences for pork.*

Originality/value: *The results of research presented in this paper come to bridge a cognitive gap in understanding what drives the Polish population's preferences for buying and consuming pork labelled "raised without antibiotics." They also emphasize the importance of sustainable pork production, especially including the no-antibiotic farming systems used in making food safer and more health-beneficial.*

[1]*Assoc. Prof., Life Science University, Department of Law and Enterprise Management in Agribusiness, Faculty of Economics, Poznań University of Life Sciences, Poland, ORCID: 0000-0002-9245-0548, e-mail: magdalena.kozera@up.poznan.pl;*
[2]*Ph.D., Department of Law and Enterprise Management in Agribusiness, Faculty of Economics, Poznań University of Life Sciences, Poland, ORCID: 0000-0001-6653-2745, e-mail: jaroslaw.uglis@up.poznan.pl;*

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1. Introduction

Pork has for many years been among the Europeans' favorite meats. According to OECD data, with 33.5 kg per capita, pork accounts for 48% of their total annual meat consumption (OECD 2023). However, the most recent studies clearly indicate a decline in both pork and total meat consumption in Europe (Bom Frøst, 2023).

The reasons behind it include changes in consumer awareness caused by factors such as the COVID-19 pandemic, as well as a decline in prosperity which partly results from it (post-pandemic inflation and the related economic downturn, reduction in employment etc.).

As shown by analyses of both pre- and post-pandemic consumer behavior, consumers become increasingly health-aware, which is manifested by a moderate or strong reduction in meat consumption (Mroczek, 2020; Przeliorz-Pyszczek, 2021), on the one hand, and by paying greater attention to meat quality and health properties (Grębowiec, 2021), on the other.

These changes also result in putting a stronger pressure on meat (including pork) producers and on their production methods, especially including matters related to animal health, reduced use of antibiotics, and ensuring optimum development conditions throughout the husbandry process.

For pork producers, this is an important signal that the market witnesses the emergence of a new niche created by informed consumers who expect not only being able to purchase meat with specific characteristics but also having an insight into how it is produced. Furthermore, they review it in terms of production sustainability and environmental impacts.

The purpose of this paper is to present the research findings on consumer preferences for purchasing pork labelled "raised without antibiotics." Therefore, a study was conducted in order to:

(1) investigate the way consumers view pork labelled "raised without antibiotics,"
(2) explore the differences in socio-demographic factors which affect the way it is perceived,
(3) determine the consumers' willingness to purchase pork labelled "raised without antibiotics" and the factors affecting their purchasing decisions,
(4) make an attempt to determine the profile of consumers who prefer pork labelled "raised without antibiotics."

2. Literature Review

2.1 Polish and EU's Meat Markets

In human diet, meat and meat preparations represent a major source of easily digestible, complete proteins, high-energy fat and vitamins (especially B vitamins). Meat also provides many valuable nutrients, including iron, zinc and selenium ions, as well as amino acids which are essential for proper metabolism in human body (Pisula and Pospiech, 2011; Blicharski *et al.*, 2013).

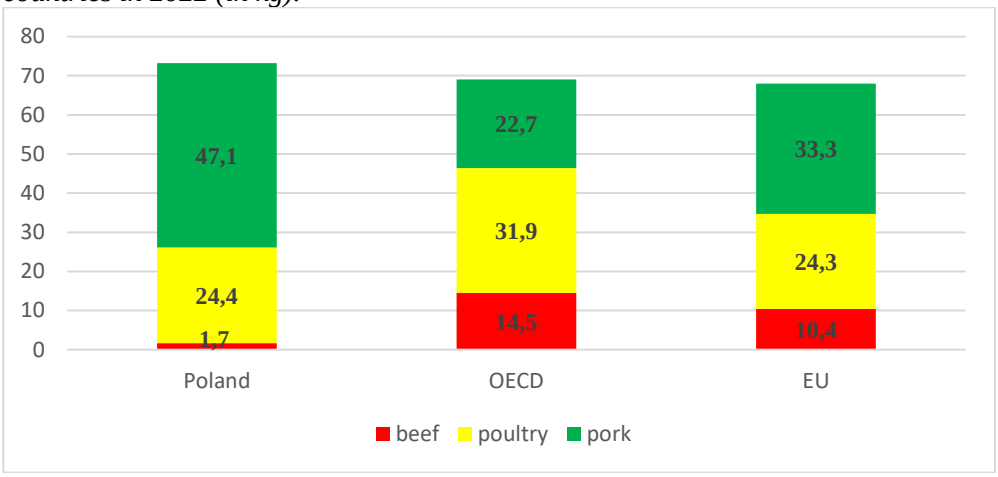
The changes affecting both the organization of meat supply (a broader offering, greater availability, more detailed product information) and the drivers of demand (economic situation, education—including food and health topics, demographic transformation etc.) are the reasons why consumers start to pay informed attention to production sustainability matters, i.e. to whether production is environmentally friendly, and whether food products are free from GMO and antibiotics (Zduńczyk *et al.*, 2022).

In Poland, pork is among the most purchased and most consumed meats, next to poultry and beef. Poland is ranked third in the EU and fourth in Europe in terms of pork consumption (*Wieprzowina – Nowa Perspektywa*, 2021).

In 2024, an average Pole consumed 45 kg of pork, 1.8 kg of beef and over 26 kg of poultry per year (*Dostawy na rynek oraz spożycie*…, 2024). According to forecasts, meat consumption will remain at a similar level in the next years, with pork losing approximately half of a kilogram to poultry.

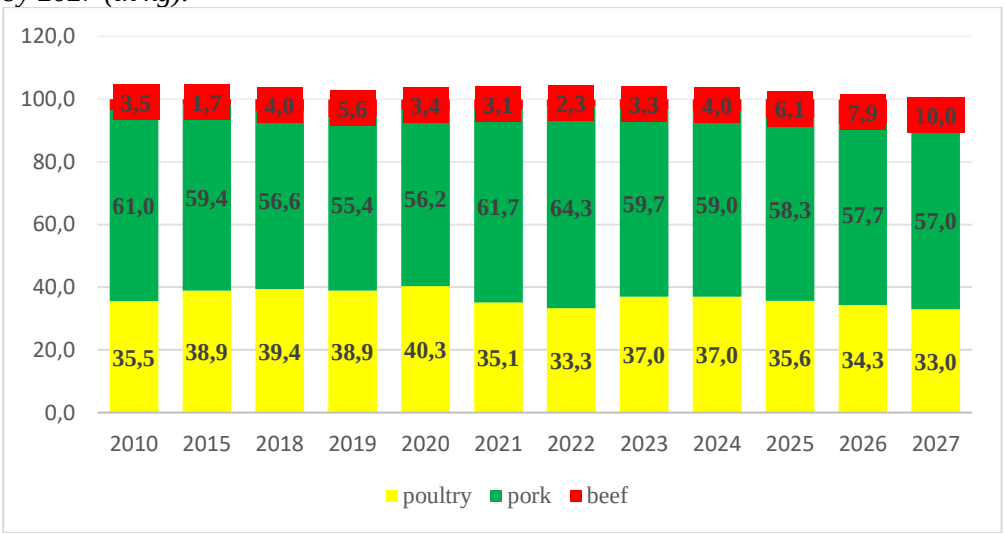
Generally, at ca. 78 kg per capita, the average meat consumption in Poland is above the European average of 64.2 kg. However, while meat consumption has been in a decline trend for the last couple of years in many European countries, Poland is among heavy consumers of meat, together with Ireland, Cyprus (with 86 kg per capita per year), Portugal (82 kg) and Spain (81 kg) (Bom Frøst 2023).

Figure 1. *Pork, poultry and beef consumption in Poland and in OECD and EU countries in 2022 (in kg).*



Source: *Based on https://forsal.pl/biznes/rolnictwo/artykuly/9379057,spozycie-miesa-w-polsce-na-tle-europy-jemy-wiecej-niz-brytyjczycy-ko.html*

Figure 2. *Meat consumption per capita in Poland in selected years, with a forecast by 2027 (in kg).*



Source: *https://forsal.pl/biznes/rolnictwo/artykuly/9379057,spozycie-miesa-w-polsce-na-tle-europy-jemy-wiecej-niz-brytyjczycy-ko.html*

Often referred to as a driver of changes in consumer awareness, the COVID-19 pandemic also provided momentum for revising the perception of food, including meat, especially in terms of its health-safety properties (Duda-Chodak *et al.*, 2020; Wachyuni and Wiweka 2020; Thomas and Feng 2021). Although there already had been strong public awareness of threats related to African swine fever (ASF), pandemic was the very factor that reinforced these processes.

As Zduńczyk, Modzelewska-Kapituła and Tkacz (2022) indicate, the opinion about pork usually results from lack of product knowledge and from misleading information about its nutritional values (Zduńczyk *et al.,* 2022). That list also includes other important aspects, such as specifying the place of origin or the husbandry regime.

2. Meat Raised without Antibiotics

The need for reducing—or at least strictly controlling—the use of antibiotics in animal production, as reported by consumers and environmental organizations in different countries (Lusk *et al.,* 2006), was met with support in EU's legislation which extends the previous definition of animal welfare and regulates the trade in and use of veterinary medicinal products (Nunan, 2022).

However, previous measures have been taken on both sides of the Atlantic with a view to put into practice the principles of sustainable pork production, including the reduction—if not total elimination—of antibiotics, improvement in animal farming conditions, and animal feeding optimization (Singer *et al.,* 2019; Cybulski *et al.,* 2021; Lincoln, 2021).

Meat was marketed with different kinds of labels, i.e., "antibiotic free" (including in the US, Germany and Italy), "no antibiotics ever," and "no critically important antibiotics" (Bradford *et al.,* 2022), which initially sparked only little interest among the buyers (both processors and consumers). However, that started to change over time. Both producers and consumers started to appreciate the benefits brought by the revised production system, whether in the environmental, social or economic dimensions.

As often indicated by practitioners and researchers, adequate animal husbandry and feeding methods allow to control meat quality, including through a reduction in fat content or enhancement of health qualities of meat (Barłowska *et al.,* 2017). Today's sustainable practice for porcine production is an attempt to meet these findings, and the implementation of no-antibiotics pork farming is an example of it (Styburski *et al.,* 2024). That production approach requires analyzing and exploring the interaction between genetic and environmental factors, which results in enhanced animal health. Ultimately, it also involves a total shift away from using antibiotics (Pejsak, 2020).

In Europe, the most widely known experiences in that area are those of Danish producers who entered into an arrangement with a processor (Danish Crown) and initiated a project to raise pigs for fattening without the use of antibiotics (Lynegaard *et al.,* 2021; Tams, 2022).

In that animal production system, no antibiotics are used from the moment the animals are introduced to the farm until they are sold (slaughtered). However, it does not mean the producers do not respond to animals becoming sick. In such a situation, a pig is treated with antibiotics after it is separated from the rest of the herd.

Once cured, it does not rejoin it but is moved to a group of traditionally farmed animals. The remaining batch of animals delivered to the slaughterhouse is composed of pigs for fattening which did not have any contact with this kind of drugs in their entire life.

Although it gives rise to doubts expressed by some farmers (claiming that it involves greater costs of animal farming and ensuring animal welfare), for others it represents a challenge and an opportunity for finding a market niche for their products. As shown by their experience, a large percentage of pigs can be raised without antibiotics, and the related techniques and husbandry practices form a pattern which can be passed over to other producers (Randox Food Diagnostics, 2018).

The bottom line is a general drop in the amount of antibiotics administered to pigs, which is important from the perspective of informed buyers as it reduces growth of antibiotic resistance in meat consumers.

3. Methods and Materials

The purpose of this study was to collect cross-cutting consumer data on what drives their willingness to buy pork labelled "raised without antibiotics." An important part of it was to determine the behavioral and psychological factors affecting the consumers' purchasing decisions.

Desk research, diagnostic survey and literature analysis were the methods used in carrying out this study. The survey questionnaire developed by the author relied on selected elements from a study by Bradford *et al.* (2022).

Data was collected through a CAWI-based online survey carried out from September 6 to 17, 2024, at the SurvGo platform delivered by BioStat Sp. z o.o. in a consumer panel. The survey was administered on a voluntary and anonymous basis. All participants were made aware of the purpose of this study, and gave informed consent to take part in it. The survey was designed in line with guidelines for ethical conduct of research.

All interviewees were adult and able to give informed consent to participate in the study. They were also assured that they could withdraw from the survey with no negative consequences.

The study did not collect any personal data or emails that would make the respondents identifiable. None of the interviewees was subject to any harmful or traumatizing factors.

The research procedure was approved by the Rector's Ethics Commission for Scientific Research Involving the Participation of Humans at the Poznań University of Life Sciences (opinion No. 13/2024 of June 21, 2024).

An important part of consumer opinion research consists in determining the sample size. The following formula was used for that purpose:

$$n = \frac{Z^2_{\alpha/2} \cdot 0.25}{d^2}$$

where *d* is the permissible error and *Zα/2* is the value resulting from the confidence interval used; for a 95% confidence level, *Zα/2* = 1.96.

The formula above allows to calculate the necessary size of the sample for any confidence coefficient (1-α) and for any maximum statistical error ±*d*. Therefore, irrespectively of the size of the general population, the size of the sample typically varies in the range of 1000 to 1100 (Szreder, 2010).

Under the standard assumption that the maximum permissible statistical error is *d* = ± 3% = ± 0.03 and the confidence coefficient is 0.95, the minimum sample for the study should be 1067 people. Ultimately, the sample was composed of 1177 respondents. It can be assumed that the maximum measurement error is 2.86% (at α = 0.95).

The study used the Chi-squared Automatic Interaction Detector (CHAID), a classification tree method, to identify consumer groups interested in buying pork labelled "raised without antibiotics." The following assumptions were made in determining the CHAID model parameters:

- the costs of erroneous classifications will be equal,
- the significance level for split nodes is 0.05,
- the results will be validated for quality with a V-fold cross-test (with V = 10),
- the Bonferroni Correction is used.

The statistical analysis of factual materials collected in the study was carried out with STATISTICA 13.3. The survey questionnaire included single-choice questions and used a seven-point Likert scale (1: strongly disagree, 7: strongly agree). The results were found to be statistically significant if $p < 0.05$. The results were described and presented in a tabular and graphical form.

4. Results and Discussion

The survey was completed by a total of 1177 persons, mostly women (53.4%). The respondents differed in age; the largest age groups were those of 25-to-34-year-olds and 35-to-44-year-olds, accounting for 32.3% and 28.5% of the total sample, respectively. The average age of the interviewees was 40 (see Table 1 for socio-demographic details).

The respondents demonstrated high levels of education, with more than half (54.1%) of them having a university degree and 36.4% a secondary education. This translated

into their income levels and professional status. As much as 61.4% of participants declared to have a net monthly income of over PLN 2,500 per capita. Clerk was the most frequent occupation (48.9%).

According to the analysis of households, the largest group (29.8%) declared to live in a two-person household, followed by 27.4% who live in a three-person household. Another finding is that 56.5% of respondents do not have children aged below 16. Of those who declare to have children, more than half (53.7%) are single-child families (23.4% of the sample), 38.3% are two-child families (16.6% of the sample), whereas only 8.0% have three or more children (3.5% of the sample).

The participants lived both in small towns (villages) and in cities with a varying population. The vast majority (39.2%) were residents of big cities with a population of over 200,000. In turn, one fifth of the questionnaires were completed by small-town and rural dwellers (20.9%). The smallest group in this study was that living in cities with a population between 100,000 and 200,000 (18.3%).

Table 1. *Socio-demographic details and characteristics of the study sample (n=1177).*

Variables		Sample (%)
Gender	Female	53.4
	Male	46.6
Age	18-24 years	8.1
	25-34 years	32.3
	35-44 years	28.5
	45-54 years	17.8
	55-64 years	7.3
	65+ years	5.4
Highest education level	Primary education	1.9
	Vocational education	7.6
	Secondary eductaion	36.4
	Higher education	54.1
Occupation	Employed as office worker	48.9
	Employed as manual worker	27.1
	Unemployed	3.9
	Running its own business	5.4
	Retired	8.7
	Pupil / Student	3.1
	Unable to work	0.6
	Full-time homemaker	2.3
Household net income	Under 1000 PLN monthly per capita	3.9
	1001-1500 PLN monthly per capita	7.3
	1501-2000 PLN monthly per capita	11.2
	2001-2500 PLN monthly per capita	16.2
	Above 2500 PLN monthly per capita	61.4
Household size	1	11.5

	2	29.8
	3	27.4
	4	22.3
	5+	8.6
	Prefer not to say	0.4
Number of children under 16 in household	0	56.5
	1	23.4
	2	16.6
	3+	3.5
Place of residence	Village or town of 20,000 inhabitants	20.9
	Town of 20,000-100,000 inhabitants	21.6
	Town of 100,000-200,000 inhabitants	18.3
	City of more than 200,000 inhabitants	39.2
Frequency of pork purchase	Daily	3.2
	Several times a week	26.7
	Several times a month	54.6
	Every few months	9.3
	I prefer a different type of meet	3.1
	I do not buy meat	3.1
Frequency of pork consumption	Daily	5.0
	Several times a week	33.5
	Several times a month	47.7
	Every few months	7.4
	I prefer a different type of meet	2.7
	I do not eat meat	3.7

Source: *Authors' calculations.*

Considering the purpose of this study, it was important to determine how often pork is purchased and consumed. Note that pork is the second most purchased kind of meat in Poland, right after poultry. Those two types of meats are consistent with "comfort food," a trend which has been noticeable in consumer choices over the last years. People want to eat something they know and like; they know it is of good quality and will enjoy eating it (Moskal and Michalska, 2017; Szef Kuchni, 2023).

The study found that more than half of respondents (54.6%) purchased pork a couple of times per month, whereas one-fifth did so several times a week. The finding from the analysis of pork consumption frequency is that 5.0% of respondents eat pork on a daily basis. Almost half of the sample eat it several times a month (47.7%), and every third interviewee does so several times a week (33.5%). It is worth noting that 6.4% of respondents do not consume pork at all or prefer another kind of meat.

In line with the defined goal, this study proceeded to examining the consumers' perception of and willingness to purchase pork labelled "raised without antibiotics." Having the option to choose between pork labelled "raised without antibiotics" and unlabelled pork, a vast majority (73.00%) of respondents would pick a labelled product (M=5.39, see Table 2).

Furthermore, three-quarters of the sample (75.28%) declared their willingness to buy labelled pork (M=5.50). The respondents realize that pork raised without antibiotics requires higher production outlays. When asked if they would be inclined to pay more for it, nearly two thirds (65.4%) said yes (M=5.00).

Table 2. *Consumer perception of and willingness to buy pork labelled "raised without antibiotics."*

Variables	Mean	Median	Standard Deviation	Kurtosis
Given a choice between pork labelled " raised without antibiotics" and pork without the label, I would choose the one labelled " raised without antibiotics"	5.39	6	1.56	0.25
I would be more willing to buy pork labelled "raised without antibiotics" label than those without this label	5.50	6	1.51	0.35
I would be willing to pay more for this pork than available pork without the "raised without antibiotics" label.	5.00	5	1.62	-0.06

Note: All items were scored on a 7-point Likert scale.
Source: *Authors' calculations.*

The statistical tests revealed a significant difference between male and female consumers in their choices of pork labelled "raised without antibiotics." It turns out that women are much more interested in it (M=5.50, p=0.006). Women also proved to be more willing to purchase pork labelled "raised without antibiotics" (M=5.60, p=0.011) and to pay more for it (M=5.13, p=0.004) (items scored above 5).

A significant difference was also discovered between age groups (Table 3). Older respondents were more interested in choosing pork labelled "raised without antibiotics" (p=0.000) and more willing to buy it (p=0.016) than younger participants. In turn, age was found not to have any significant impact on the inclination to pay more for it (p>0.05).

At the same time, the statistical analyses did not discover any statistically significant impact of education level on the matters considered (p>0.05).

The above is consistent with what was established by Goddard et al. (2017) who found that pork consumers in Germany (40.8%) and Canada (27.7%) were interested in eating meat originating from animals not treated with antibiotics.

In turn, a study by Bradford *et al.* (2022) revealed a significant impact of gender and age on the perception of—and thus on the willingness to buy—pork labelled "raised without antibiotics." They also found that the willingness to buy it was primarily driven by consumers' convictions about animal welfare and product quality.

Table 3. *Factors influencing the perception of and willingness to buy pork labelled "raised without antibiotics."*

Variables	Age Mean (SD)		Gender Mean (SD)		Education Mean (SD)	
	< 45	45 +	Female	Male	≤ Secondary	Higher
Given a choice between pork labelled " raised without antibiotics" and pork without the label, I would choose the one labelled " raised without antibiotics"	5.28 (1.54)	5.63 (1.58)	5.50 (1.55)	5.25 (1.56)	5.39 (1.59)	5.39 (1.54)
I would be more willing to buy pork labelled "raised without antibiotics" label than those without this label	5.43 (1.48)	5.65 (1.56)	5.60 (1.51)	5.38 (1.51)	5.49 (1.53)	5.50 (1.49)
I would be willing to pay more for this pork than available pork without the "raised without antibiotics" label.	4.98 (1.57)	5.04 (1.72)	5.13 (1.62)	4.85 (1.60)	5.03 (1.63)	4.97 (1.61)

Source: *Authors' calculations.*

Next, the respondents were asked about their opinion on how pork labelled "raised without antibiotics" is perceived in the context of eight selected characteristics (Table 4). According to the results, they view it as healthier than traditional meat (M=5.53), safe for consumption (M=5.63), free from antibiotics (M=5.56) and more expensive (M=5.89).

The respondents also remarked that pork carrying this label would be more difficult to find in the stores (M=4.17), because only a small number of producers market it. In this case, the respondents' replies were focused around the mean value, as indicated by a negative kurtosis. This reflects the absence of outliers.

Findings from this study are similar to what was established in a research project carried out by Bradford *et al.* (2022) with British consumers. In that study, pork labelled "raised without antibiotics" was viewed by a dominant group of consumers as being more expensive (M=5.64), free from antibiotics (M=5.79) and more difficult to find (M=3.77) than pork available in supermarkets.

The above indicates that Polish consumers demonstrate a highly positive attitude towards the characteristics of pork labelled "raised without antibiotics" covered by this study. As demonstrated earlier, although the interviewees perceive pork labelled "raised without antibiotics" as being more expensive (see Table 4), a vast majority of them would be inclined to pay more for it (see Table 2). As part of the survey, the respondents were asked how much more would they be willing to pay for (certified) pork labelled "raised without antibiotics" (Figure 3).

Table 4. *Behavioral beliefs about pork labelled "raised without antibiotics."*

Variables	Mean	Median	Standard Deviation	Kurtosis
"Raised without antibiotics" labelled pork will likely be healthier	5.53	6	1.48	0.88
"Raised without antibiotics" labelled pork will likely be more expensive	5.89	6	1.31	1.56
"Raised without antibiotics" labelled pork will likely be tastier	5.26	5	1.47	0.10
"Raised without antibiotics" labelled pork will likely be easier to find	4.17	4	1.60	-0.55
"Raised without antibiotics" labelled pork will likely be of more satisfying quality	5.52	6	1.46	0.81
"Raised without antibiotics" labelled pork will likely be safer to eat	5.63	6	1.40	1.05
"Raised without antibiotics" labelled pork will likely have higher animal welfare standards	5.38	6	1.50	0.41
"Raised without antibiotics" labelled pork will likely be free from antibiotics	5.56	6	1.45	0.77

Note: *All items were scored on a 7-point Likert scale.*
Source: *Authors' calculations.*

A large group (39.34%) declared they would be inclined to pay 10% to 15% more for it. At the same time, one-quarter of the sample (28.29%) would accept higher prices only within the limit of 10%. In turn, only over five percent of the sample (5.95%) would be willing to pay even over 20% more than the price of available unlabelled pork.

This study used the classification tree method, including the CHAID (Chi-squared Automatic Interaction Detector) modeling technique in order to identify the socio-demographic profile of consumers interested in buying pork labelled "raised without antibiotics."

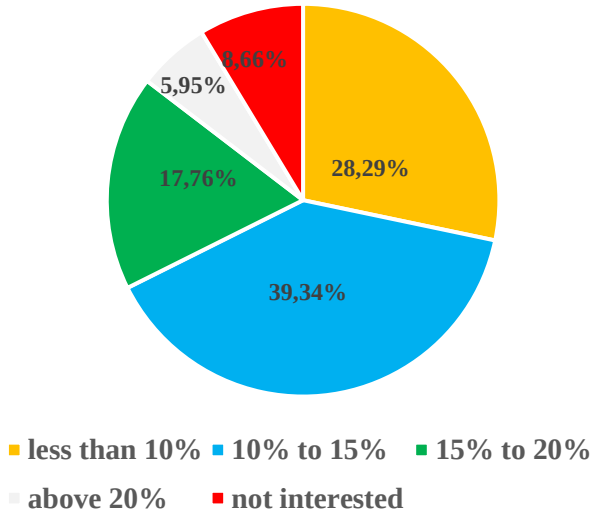
The advantage of classification trees is the ability to provide legible classification rules and to present the results in a graphical layout while ensuring a reasonable level of precision (Piltaver *et al.*, 2016, Milanović and Stamenković, 2016).

The structuring of a qualification tree is a multistage process; each step includes analyzing all predictors and selecting the one which ensures the best split, i.e., separates the most homogenous subsets (Kozera *et al.*, 2014).

The analysis relied on eight predictors, i.e., gender, age, education level, household size, household income, occupation, children in the household and place of residence. The following sentence "I would be more willing to buy pork labelled 'raised without antibiotics' than unlabelled pork," a binary logical expression, was used as the

explained variable in the CHAID model, having in mind that a large part of respondents (75.29%) declared to be willing to buy it.

Figure 3. *Consumers' willingness to pay more for pork labelled "raised without antibiotics."*



Source: *Authors' calculations.*

In analyzing the predictors' relevance ranking (Table 4), note that age, occupation and household incomes are important determinants of willingness to buy pork labelled "raised without antibiotics," whereas the fact of having children in the household has the smallest impact on it.

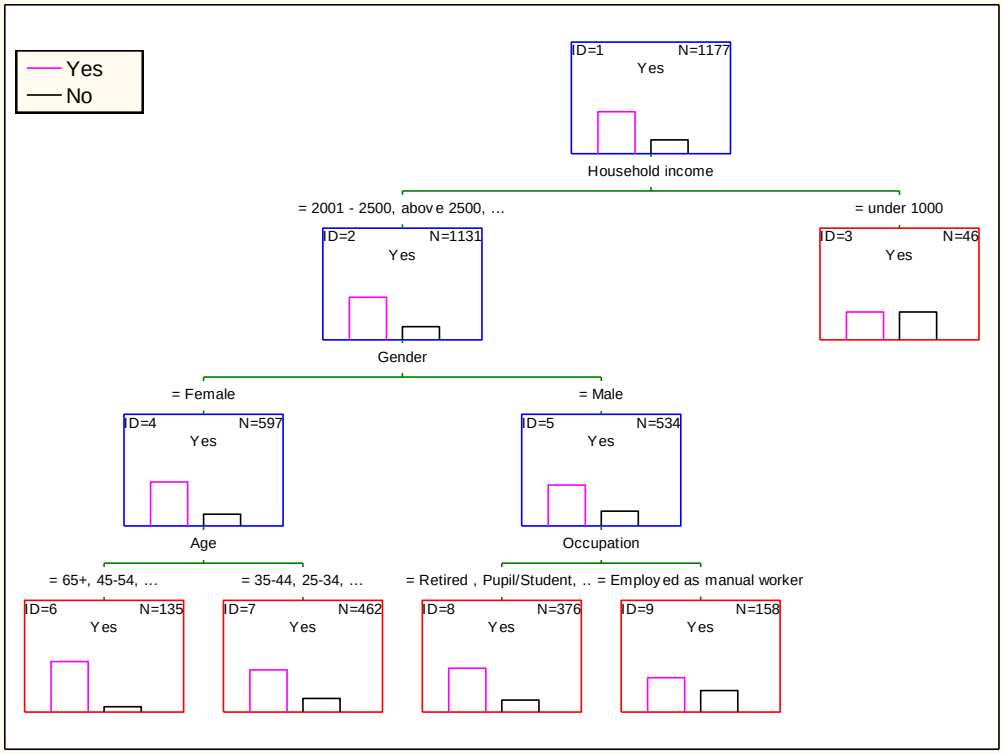
Table 5. *Predictors of willingness to buy pork labelled "raised without antibiotics" in order of precedence.*

Predictors	Rank variable	Validity
Age	100	1.000
Occupation	97	0.971
Household income (net per capita)	76	0.755
Education level	58	0.581
Place of residence	44	0.436
Gender	29	0.287
Household size	17	0.170
Children in the household	11	0.106

Source: *Authors' calculations.*

The classification tree model (Figure 4) consists of four split nodes and five terminal nodes. The analysis of the CHAID model revealed the existence of five groups which differed from one another in the percentage of respondents willing to buy pork labelled "raised without antibiotics."

Figure 4. *Results of the CHAID-based analysis of the respondents' willingness to buy pork labelled "raised without antibiotics."*



Source: *Authors' calculations.*

The model suggests that household incomes, followed by gender, had the greatest importance in splitting the sample into groups. The respondents' gender was related to age and occupation. The conclusion from analyzing the identified nodes is that a vast majority of women aged over 45 (90.37%) and up to 45 (75.54%) were interested in buying pork labelled "raised without antibiotics." Conversely, occupation turned out to be an important predictor for male respondents.

More than three-fifths of blue-collar workers (61.39%) and a vast majority of men (78.46%) declared their intent to buy it. In turn, in the group of respondents with a net income below PLN 1,000 (ID=3), the percentage of individuals interested in purchasing pork labelled "raised without antibiotics" was equal to that of those not interested in it (50.00%).

5. Conclusions and Recommendations

The pandemic period initiated a series of changes in how both producers and consumers approach food production processes, with particular emphasis being placed on food safety in health and environmental terms. Examples of measures taken in that

respect include pork production which is subject to pressure from animal welfare regulations, on the one hand, and from increasingly informed consumers, on the other. As a consequence, it gradually evolves towards a reduction of routinely used antibiotics.

This paper presents the research findings on consumer preferences for purchasing pork, and focuses on meat labelled "raised without antibiotics." As pork is one of the most consumed meats in Poland and in the EU, this study endeavored to tell whether the customers are aware of the presence of antibiotics in its production processes, and especially whether they are able to find pork labelled "raised without antibiotics" on store shelves. It turns out that more than half of respondents purchase pork a couple of times per month, whereas one fifth do so even more frequently.

Thus, over three-quarters of the interviewees declared their intent to buy pork labelled "raised without antibiotics." As also revealed by this study, a similar group of respondents would willingly purchase it despite realizing that it requires higher production outlays and is therefore more expensive. Moreover, they would be inclined to pay more for it. Meat labelled "raised without antibiotics" was usually sought after by women, especially those aged over 45. They are middle-aged adults with stable private and professional lives.

Generally, consumers view pork raised without antibiotics as healthier than traditional meat, safe for consumption and free from antibiotics, but also more expensive. However, the respondents realize that pork carrying this label would be more difficult to find in the stores, because only a small number of producers market it.

As shown by this study, Polish consumers demonstrate a highly positive attitude towards the characteristics of pork labelled "raised without antibiotics" covered by this study, and are similar in that respect to British, German and Canadian buyers. The above is important for producers of pork raised without antibiotics, who increasingly often decide to shift to that production system as they expect measurable economic benefits from it.

These findings provide relevant information for pork producers, labeling procedures, and people contributing to the development of food policy and legislation.

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