
Differences in Online Shopping Risk Perception Between Urban and Rural Consumers in Poland

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Abstract:

Purpose: The main objective of the paper is to analyse the risk perception in online shopping by Poles living in cities and in rural areas.

Design/Methodology/Approach: The study is based on the CAWI research conducted from September 17 to September 25, 2020 on the sample of 1,115 respondents, concerning the online shopping in cities and rural areas in Poland. The frequency of online shopping and two risk factors were analyzed. Three hypotheses were verified: H1: there are no general differences between online shopping by people from cities and rural areas in Poland; H2: there are no general differences between people from cities and rural areas in Poland concerning the lack of trust risk factor and H3: there are no general differences between people from cities and rural areas in Poland concerning the lack of the ability to assess actual quality risk factor.

Findings: While there are still many differences between rural areas and cities in Poland, considering the online shopping behavior and perception of risk there are no observable differences – all three hypotheses are verified positively. Since it is the first study with such a solid statement, therefore further research is required on the subject.

Practical Implications: The practical implication for the e-commerce in Poland is that e-consumers from the rural areas and cities should be treated similarly, as they behave in a very similar way.

Originality/value: The paper is based on own, primary research.

Keywords: Rural areas and cities in Poland, online shopping, online shopping risk.

JEL classification: R12, M31, D10.

Paper Type: Research study.

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1. Introduction

There is a debate on the differences between the quality of life in cities and rural areas in Poland. Many authors indicate these differences (Chmielewska and Zegar, 2018; Borys, 2015) indicating that in rural areas, compared to urban areas, the conditions of technical, transportation, and housing infrastructure are inferior, and there is also limited access to services and modern technologies.

However, the penetration of internet access is quite high in Poland, reaching 93,3% of households in 2022, with the almost even spread among cities and rural areas: big cities: 94,4%, small cities: 92,3% and rural areas: 93,2% (GUS Report „Społeczeństwo informacyjne w Polsce w 2022 [Central Statistical Office in Poland Report “Information society in Poland in 2022]). According to data from the report, 64.6% of Poles aged 16-75 declared making online purchases within the last 12 months.

With the availability of access to internet-connected computers, as well as mobile phones and tablet computers, be it at home, office or through facilities such as public libraries, restaurants and cybercafés, nowadays, this trend of shopping has become a common mode of transaction. It has become a part of daily life ranging from purchase of flight tickets, booking hotel rooms, movie tickets, fashionable apparel and beauty products and is now also embracing toward online grocery (Ariffin, Mohan, and Goh, 2018).

The study of e-consumer behavior is gaining in importance due to the proliferation of online shopping (Dennis *et al.*, 2009). The paper focuses on one particular aspect of e-consumer behavior – the perception of online shopping risk in rural areas and cities in Poland.

2. Literature Review on Online Shopping Risk

The basic model argues that functional considerations influence attitudes to an e-retailer, which in turn influence intentions to shop with the e-retailer and then finally actual e-retail activity, including shopping and continued loyalty behavior (Dennis *et al.*, 2009). Consumer-oriented research has examined the following factors influencing e-consumer behavior:

- psychological characteristics,
- demographics,
- perceptions of risks and benefits,
- shopping motivation,
- shopping orientation.

The buying process is a multistage process, during which the concretization of the purchase decision is made. It most often consists of five successive stages, which are traditionally comprised of the following steps: awareness of the need, search for information, evaluation of alternatives to choose from, the decision to purchase (purchase) and feelings after purchase (Kotler and Armstrong, 2008).

Internet penetrates and creates each stage of such understood buying process. Development of the internet has changed to a large extent the way consumers do shopping. Currently, this process is extended and far less predictable. Consumers are less loyal to a brand but are increasingly willing to share your experiences and opinions with other potential clients.

An important aspect of online shopping is perception of risk. Purchase risk is an important construct in marketing, particularly in studies of online consumer behavior (Coker *et al.*, 2011). Many researchers have also proposed a term trust as an important element of B2C e-commerce (Chu and Yuan, 2013). Internet users perceive significant risks and uncertainties in transacting with an unknown seller on a web site (Lee *et al.*, 2011).

Some authors believe that consumers on the web may fear providing credit card information to any commercial Web provider and those consumers simply do not trust most Web providers enough to engage in exchange relationships involving money (Salam *et al.*, 2003).

Several studies have produced empirical evidence suggesting that if a consumer is doubtful in their ability to evaluate a product online, or believes the internet is not secure place to purchase, chances are they will not go online to make the purchase (Cocker *et al.*, 2011).

The main problem that can appear is the risk of fraud because the buyer cannot control in a direct way the company or the person who sells the products (D'Alessandro *et al.*, 2012). When consumers are unable to physically inspect or trial a product before purchase, they are more likely to perceive the purchase as risky. Some products are more easily evaluated on the internet than others, depending on the experiential nature of attributes used to reach a judgment of quality.

Perceived risk is the subjective determination of the loss, which plays a more significant role in customers' decision-making than the perceived value (Mitchell, 1999). It is induced by uncertainties in transactions because there is much information asymmetry in online shopping, and online customers are unable to examine the products prior to purchase.

Therefore, for the purposes of the study two main risk factors are going to be considered:

1. the lack of trust,
2. the lack of the ability to assess actual quality.

3. The Research Design

The research was conducted from September 17 to September 25, 2020, using the Computer-Assisted Web Interviewing (CAWI) method through a research panel. To ensure the reliability of responses, several system tools were employed, and results were analyzed for accuracy.

The primary system tools used were:

1. IP Multi-Filling Block - preventing multiple survey completions from the same IP address.
2. Cookies Block - if the respondent's browser remembered that the survey had been previously completed, it blocked further entries.

Unreliable responses in the database were primarily identified based on the time taken to complete the survey. If an interview was significantly shorter than the average survey completion time, it was removed from the database. Each respondent who was eliminated during the database cleaning process was identified, and if the same situation occurred with multiple data sets, that person was permanently removed from the panel.

Surveys were collected with a surplus to ensure an adequate sample size after the removal of unreliable responses.

Panelists were rewarded in two ways:

1. Activity points - a ranking of the most active panelists was compiled each month, and the most active individuals received rewards.
2. Cash points - panelists could withdraw cash points to their own bank accounts after reaching a minimum point threshold.

As part of the study, 1,115 surveys were conducted on a representative sample of Poles, taking into account gender, age, and the size of the place of residence.

The sample was cross examined for validity with the population of Poland according to the Social Diagnosis of 2015 (Table 1). To compare the fit of the sample's characteristic based on the size of the place of residence with the population of Poland according to the Social Diagnosis of 2015, a chi-squared goodness-of-fit test was conducted with the result $\chi^2(3) = 3.946$, $p = 0.267$.

There is no basis for rejecting the null hypothesis of no differences between the population and empirical distribution of the variable in the sample.

Table 1. *The verification of sampling*

	Social Diagnosis of 2015	Sample	Difference
Rural areas	40.1	37.3	-2.8
Cities with a population of up to 100,000 residents	31.2	33.3	2.1
Cities with a population of 100,000 to 500,000 residents	17.2	17.6	0.4
Cities with a population of 500,000 or more resident	11.4	11.8	0.4

Source: *Own elaboration.*

For the purpose of the research the following hypothesis were stated:

- Hypothesis 1 (H1) there are no general differences between online shopping by people from cities and rural areas in Poland.
- Hypothesis 2 (H2) there are no general differences between people from cities and rural areas in Poland concerning the lack of trust risk factor.
- Hypothesis 3 (H3) there are no general differences between people from cities and rural areas in Poland concerning the lack of the ability to assess actual quality risk factor.

The risk factors (hypotheses 2 and 3) were analyzed for various types of purchase goods, namely: furniture and decorative items; medicines, cosmetics; Clothing & Footwear; electronics and photo equipment; Appliances' Computers & Accessories; Children's Goods; Sporting & Hiking Goods; Automotive Supplies; Foodstuffs; Jewelry & Watches; Books & Multimedia; cinema tickets, concert tickets, etc; Financial Services; Educational Services; Insurance services; Tourism and transport services; telecommunication services.

4. Findings

The comperhansion of the frequency of online shopping between cities and rural areas in Poland:

The frequency of online shopping were measured in terms understandable by consumers, understanding that it is a question that refers to the memory of respondents; therefore the following scale was introduced: I don't buy online at all; I shop online, but I haven't shopped online yet this year; once in the last year;a total of several times a year; On average, at least a few times a month; On average, at least a few times a week.

The results are presented in Table 2.

Table 2. *The frequency of online shopping in cities and rural areas in Poland*

Frequency of online shopping	Place of residence				
	Rural areas	City up to 20,000 inhabitants	City 20,001-100,000 inhabitants	City 100,001-400,000 inhabitants	City with more than 400,001 inhabitants
I don't buy online at all	2.3	3.8	4.4	6.4	2.3
I shop online, but I haven't shopped online yet this year	3.9	1.9	7.9	2.3	1.6
once in the last year	3.9	2.9	4.0	4.7	2.3
a total of several times a year	40.3	42.9	42.3	48.8	38.8
On average, at least a few times a month	46.0	45.7	37.4	34.3	48.1
On average, at least a few times a week	3.6	2.9	4.0	3.5	7.0

Note: Data shown in percentage (%), N=1018.

Source: Own elaboration based on the research results.

Comparing the observed frequencies for rural areas and cities, no significant differences can be observed. Therefore, the Hypothesis 1 (H1) “there are no general differences between online shopping by people from cities and rural areas in Poland” should be verified positively.

The comprehension of the lack of trust risk factor in online shopping between cities and rural areas in Poland:

The lack of trust risk factor concerning the researched consumer goods and services among the inhabitants of rural areas and cities in Poland is presented in Table 3.

Table 3. *The comprehension of the “lack of trust” risk factor in online shopping between inhabitants of rural areas and cities in Poland*

Type of consumer goods and services	Place of residence				
	Rural area	City up to 20,000 inhabitants	City 20,001-100,000 inhabitants	City 100,001-400,000 inhabitants	City with more than 400,001 inhabitants

furniture and decorative items	28.4	38.5	31.6	39.6	29.4
medicines, cosmetics	39.5	42.1	40.0	67.3	37.9
Clothing & Footwear	41.2	42.9	42.2	34.5	52.2
electronics and photo equipment	27.3	52.2	44.2	34.4	25.9
Appliances	35.2	23.8	44.4	47.1	36.7
Computers & Accessories	39.7	42.1	34.8	42.5	44.8
Children's Goods	21.7	42.9	20.0	38.5	23.5
Sporting & Hiking Goods	26.0	40.0	40.9	35.7	34.6
Automotive Supplies	26.8	45.0	41.5	21.1	54.5
Foodstuffs	37.1	41.4	48.2	48.5	47.0
Jewelry & Watches	34.1	52.2	32.7	40.0	28.1
Books & Multimedia	13.7	50.0	30.0	31.3	12.5
cinema tickets, concert tickets, etc	32.7	50.0	30.4	33.3	20.0
Financial Services	43.6	47.8	48.8	50.0	41.2
Educational Services	23.4	45.5	38.1	36.4	37.5
Insurance services	51.4	55.0	44.6	47.4	45.5
Tourism and transport services	38.8	35.3	25.0	42.9	35.7
telecommunication services	41.5	50.0	35.4	39.4	52.2
Financial Services	2.1	13.0	2.3	6.7	0.0
Educational Services	4.3	9.1	4.8	4.5	6.3
Insurance services	3.7	2.5	5.4	2.6	3.0
Tourism and transport services	2.0	5.9	3.6	0.0	0.0
telecommunication services	11.0	7.7	0.0	0.0	0.0

Note: Data shown in percentage (%).

Source: Own elaboration based on the research results.

Comparing the results between rural areas and cities, no significant differences can be observed. Therefore, the Hypothesis 2 “there are no general differences between people from cities and rural areas in Poland concerning the lack of trust risk factor” should be verified positively.

The comprehension of the lack of the ability to assess actual quality risk factor between cities and rural areas in Poland:

The lack of the ability to assess actual quality concerning the researched consumer goods and services among the inhabitants of rural areas and cities in Poland is presented in Table 4.

Table 4. *The comprehension of the “lack of the ability to assess actual quality” risk factor in online shopping between inhabitants of rural areas and cities in Poland*

Type of consumer goods and services	Place of of residence				
	Rural area	City up to 20,000 inhabitants	City 20,001-100,000 inhabitants	City of 100,001-400,000 inhabitants	A city with more than 400,001 inhabitants
furniture and decorative items	59.8	53.8	63.2	54.2	58.8
medicines, cosmetics	43.0	31.6	44.3	30.6	55.2
Clothing & Footwear	54.4	50.0	62.2	55.2	60.9
electronics and photo equipment	59.7	39.1	53.8	59.4	66.7
Appliances	53.8	52.4	64.4	52.9	56.7
Computers & Accessories	45.2	57.9	60.9	50.0	58.6
Children's Goods	45.7	14.3	60.0	23.1	58.8
Sporting & Hiking Goods	38.0	50.0	47.7	42.9	46.2
Automotive Supplies	48.2	20.0	46.3	47.4	36.4
Foodstuffs	46.6	46.6	48.2	36.4	56.1
Jewelry & Watches	51.1	43.5	67.3	55.0	62.5
Books & Multimedia	47.1	0.0	36.7	50.0	50.0
cinema tickets, concert tickets, etc	21.8	21.4	34.8	26.7	10.0
Financial Services	31.9	34.8	27.9	26.7	47.1
Educational Services	38.3	36.4	47.6	40.9	37.5
Insurance services	29.4	35.0	28.4	23.7	27.3
Tourism and transport services	38.8	35.3	50.0	38.1	14.3
telecommunication services	29.3	26.9	41.7	36.4	34.8

Note: Data shown in percentage (%).

Source: Own elaboration based on the research results.

Comparing the results between rural areas and cities, no significant differences can be observed. Therefore, the Hypothesis 3 “there are no general differences between

people from cities and rural areas in Poland concerning the lack of the ability to assess actual quality risk factor” should be verified positively.

5. Discussion

It is indicated in many studies that there is an increase in the frequency of online shopping results in an increase in the consumption of products (Brojak-Trzaskowska, Ostrowska, and Ziezula 2022). The pandemic certainly was an acceleration of the phenomenon. Observed high values of online shopping are consistent with other studies and reports (IAB 2023).

The analyzed risk factors are consistent with other studies, however the approach to online shopping risk varies significantly. The trust factor appears in studies concerning the potential finance loss (Bashir *et al.*, 2018; Curras-Perez *et al.*, 2017), and the lack of the ability to assess actual quality can be found in such studies as (Bezes, 2016; Sharma *et al.*, 2020).

Other studies consider different risk factors, like sell out risk (Song, Noone, and Han 2019), the lack of face-to-face Communication (Bilgihan and Bujisic 2015), switching risk (Dang *et al.*, 2020), social risk (Maziriri and Chuchu, 2017). One comprehensive study analyzes: Financial Risk, Product Performance Risk; Time/Convenience Risk; Privacy Risk; Psychological Risk; Delivery Risk; After Sale Risk (Navi, et al., 2019).

6. Conclusion

While there are still many differences between rural areas and cities in Poland, considering the online shopping behavior and perception of risk there are no observable differences. The practical implication for the e-commerce in Poland is that e-consumers from the rural areas and cities should be treated similarly, as they behave in a very similar way.

This similarity is evident in both internet penetration and the observed behavior of e-consumers in Poland. It is the first study with such a solid statement, therefore further research is required on the subject.

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