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FACTORS AFFECTING RENTAL USE IN THE LOWER SILESIA PROVINCE DURING THE PANDEMIC PERIOD

CZYNNIKI WPŁYWAJĄCE NA KORZYSTANIE Z WYNAJMU W WOJEWÓDZTWIE DOLNOŚLĄSKIM W OKRESIE PANDEMII

Abstract

The article focuses on the analysis and evaluation of changes in tenant behavior and expectations, in the rental market during constraints on the operation of, among others, institutions, businesses, and schools, during the pandemic. The behavior of young people, who, by definition, base their housing needs more heavily on rent, was analyzed. The purpose of the article is to analyze the factors that affect the use of rent by young people in the Lower Silesian province during the pandemic.

The fact that the pandemic has changed social expectations, including in the rental market, seems obvious. This research paper attempted to answer in what direction these changes have gone. In the process of designing the study, research hypotheses were formulated. Based on statistical analysis, it was assumed that the key factor that affects long-term rent use is lack of creditworthiness. A change in personal circumstances (for example: relationship breakup) affects long-term rental use. The analysis confirmed that there is a correlation between the number of rooms rented and the risk factors of renting. The longer people rented during the pandemic, the less often they were interested in the opportunity offered by the landlord to terminate the contract early, and the longer individuals rented prior to transitioning to remote study or work the more often they did not give up their rent.

The analysis of research in this area provides valuable information for both investors in the residential rental market and developers of residential projects shaping their sales offerings.

Streszczenie

W artykule skupiono się na analizie i ocenie zmian zachowań i oczekiwań najemców na rynku najmu w okresie ograniczeń w funkcjonowaniu m.in. instytucji, przedsiębiorstw, szkół, w czasie pandemii. Analizie poddano zachowania młodych ludzi, którzy z założenia w większym stopniu opierają swoje potrzeby mieszkaniowe na czynszu. Celem artykułu jest analiza czynników wpływających na korzystanie z czynszu przez młodych ludzi w województwie dolnośląskim w czasie pandemii.

To, że pandemia zmieniła oczekiwania społeczne, także na rynku najmu, wydaje się oczywiste. W artykule badawczym podjęto próbę odpowiedzi na pytanie, w jakim kierunku poszły te zmiany. W procesie projektowania badania sformułowano hipotezy badawcze. Na podstawie analizy statystycznej przyjęto, że kluczowym czynnikiem wpływającym na długoterminowe korzystanie z czynszu jest brak zdolności kredytowej. Zmiana sytuacji osobistej (na przykład zerwanie związku) wpływa na użytkowanie wynajmu długoterminowego. Analiza potwierdziła, że istnieje korelacja pomiędzy liczbą wynajmowanych pokoi a czynnikami ryzyka wynajmu. Im dłużej osoby wynajmowały mieszkanie w czasie pandemii, tym rzadziej były zainteresowane możliwością wcześniejszego rozwiązania umowy od wynajmującego, a im dłużej

wynajmowały mieszkanie osoby przed przejściem na naukę lub pracę zdalną, tym częściej nie rezygnowały z czynszu.

Analiza badań w tym obszarze dostarcza cennych informacji zarówno dla inwestorów na rynku wynajmu mieszkań, jak i deweloperów projektów mieszkaniowych kształtujących ich ofertę sprzedażową.

Keywords: *apartment rental, long-term rental, pandemic, PRS, Private rental sector*

Słowa kluczowe: *najem, długotrwałe korzystanie z najmu, pandemia, sektor wynajmu prywatnego*

Introduction

The COVID-19 pandemic is responsible for the most serious global economic and social crisis in recent times (Donthu i Gustafsson, 2020). A series of strictures, restrictions, and limitations introduced by national governments led to a situation where societies began to feel fear for their own safety and increased concern for their household budgets due to unpredictable situations that no one had considered just a few weeks before the pandemic occurred. Even after the pandemic began, few people thought about such far-reaching consequences of the pandemic that it led to. Fear among consumers and businesses disrupted normal consumption patterns and caused significant market anomalies (McKibbin i Fernando, 2020). A pandemic is recognized as an unpredictable and unexpected event with extreme and strong economic consequences, and in the case of the COVID-19 pandemic, the effects were felt throughout the global economy (Niewczas-Dobrowolska, 2021). The pandemic is considered a black swan event (*black swan events*). The global spread of a new coronavirus had a devastating impact on the operation of entire supply chains (Chowdhury, Paul, Kaisar i Moktadir, 2021). It is difficult to find an example of a company or entire industry that was not affected by this pandemic. Of course, there were a few exceptions where the impact of the pandemic was not negative. In some industries, such as gaming and e-commerce, the coronavirus pandemic somehow *helped* sales performance. Unfortunately, the overwhelming majority of entrepreneurs experienced the negative effects of the pandemic, which created a phenomenon that can be called *coronacrisis – a health crisis combined with an economic crisis* (Cifuentes-Faura , 2021).

The regulations imposed during COVID-19 resulted in the emergence of many economic pressures, and, in particular, reduced many people's disposable income, many began to be more vigilant about its security (Karpen i Conduit, 2020). As a result, this has led to modifications and transformations in the choices made by consumers, including with regards to the specific subgroup of them that are renters in the housing market. At the same time, these habits are likely to be modified by further regulations and procedures on how consumers make purchases and acquire products and services (Sheth, 2020) (Niewczas-Dobrowolska, 2021).

Changes in consumer behavior affect entrepreneurs and vice versa. Entrepreneurs also faced a number of challenges, which included not only the fear of declining revenues, but forced changes in the organization of business work. The government regulations introduced also directly affected people's employment. These aspects have largely affected young people, who are not typically well established professionally, as well as in terms of housing – they are starting out in life and feel the changes in the organization where they work the strongest. On top of that they usually rent rather than own properties that provide them with their living needs.

This article aims to partially fill the research gap. Its main purpose is to analyze the factors that affect the use of rent by young people in the Lower Silesian province during the pandemic period.

1. STATE OF THE RENTAL MARKET AND DIAGNOSIS OF FACTORS INFLUENCING THE USE OF PANDEMIC RENTAL HOUSING

As early as April 2020, with the onset of the coronavirus pandemic and the sudden lockdown in Poland, the rental market was changing. Changes were due to, among other things, tenants' expectations of the preferred features of rental housing.

The pandemic affected the change in the number of completed properties (Yörük , 2020), the change in property prices in the US (D'Lima i Thibodeau, 2023), (D'Lima, Lopez i Pradhan, 2022) and Italy (Del Giudice,

Pierfrancesco i Del Gi, 2020), the demand in the housing market depending on the population density in the US (Liu and Su, 2021). The market saw a decline in the number of purchase transactions caused by the order to close businesses and to stay at home (Balemi , Füss i Weigand, 2021).

In Poland, there were no radical reductions in real estate prices, and from the summer 2020, prices even began to rise. The increase in the cost of building materials or the increase in the cost of labor, the increase in the cost of building plots, stricter regulations on energy efficiency (Waligóra, 2021), together with the unrelenting demand for further investments in housing, influenced further increases in housing prices in both the primary and secondary markets. In the period from the start of the pandemic to 2023, the increase in housing prices even accelerated and amounted to about 8-10% per year.

The pandemic situation led to a decline in the creditworthiness of Poles, the number of loans issued in Q1 2022 was lower than in Q1 2021 by 16.45%. (Konieczna i Konar, 2023).

Changes in the real estate market in Poland created by the coronavirus pandemic, high inflation, the war in Ukraine, rising interest rates and declining creditworthiness, and, above all, rising prices (Konieczna i Konar, 2023), including real estate prices, have introduced major changes in the rental housing market itself. In Poland, in 2020, 75% of apartments reported for rent were rented in about 8 weeks on average, with the exception of 2018 and 2021 where renting took place after 7 weeks on average (Gdakowicz, Putek-Szeląg i Bas, 2023).

Very few studies have looked at young people's perceptions of satisfaction factors in the pandemic rental market for residential units, as the main focus of the analyses has been on price declines in the rental market. This study of falling prices was conducted on real estate agents in Krakow (Tomal i Marona, 2021). According to a US study of Craigslist ads collected, there was an average decrease in rent in the 49 metropolitan areas studied. Rent decreases were greatest in neighborhoods with black, Hispanic residents while neighborhoods with white residents saw rent increases (Kuk, Schachter, Faber i Besbris , 2021). Central Warsaw neighborhoods saw the largest decline in long-term rents (ca. – 7.7%) (Radoslaw , Gluszak, Hebczynski i Tanas, 2021).

Tenants' budget constraints are also a factor influencing the use of rentals during the pandemic. Consumers-tenants usually decide to rent an apartment

when they are not creditworthy. Due to the surge in uncertainty during a pandemic, lending institutions were often more restrictive in the number and size of mortgages they extended (Allen-Coghlan i McQuinn, 2021). Tenants make the decision to rent an apartment within their financial means (Derkacz and Gajda, 2023). Divorce rates have also increased during the pandemic. Divorce or death of a partner is one of the reasons for losing homeownership (Morris, Hulse i Pawson, 2021). In the 6 months after the first lockdown, the rate of separation increased especially among younger people (Barbuscia, Pailhé i Solaz, 2023)

Periodic restrictions imposed by the government have prevented short-term rentals (Orchard, 2020), for tourism or business travel. This state of affairs contributed to the growth of housing in the long-term rental market. Properties in the short-term market were usually well located, close to the center and had high standards. The emergence of more residential rental properties spurred a reduction in rents and a change in tenant preferences. Suddenly, tenants became more demanding and it can be assumed that the preferred combinations of features of a rental apartment changed. Features of a rental apartments that were important in the perspective of long residence time became important, such as common spaces, apartments with balconies and terraces (Tajani, Di Liddo, Guarini, Ranieri i Anelli, 2021).

For the residential rental market the pandemic has proven to be a hard lesson, showing that all traditional rental business models, such as long-term rentals, studios, 2-, 3-room units, are more resilient to the crisis than new business models based on short-term rentals, hybrid rentals, rooming, subletting, partnerships with AirBnB or Booking. There has been an influx of housing from the short-term rental market mainly from Airbnb (Radoslaw , Gluszak, Hebczynski i Tanas, 2021).

The rental market has shifted from a landlord's market to a tenant's market. Properties with a low standard of furnishings, less favorably located, became very difficult to rent, which forced owners to invest in modernizing them and adapting them to the requirements of the largest group of tenants, i.e. the expectations of the younger generation. Support instruments became available in Poland, significantly changing the legal situation of landlords by introducing regulations allowing the extension of the lease term and preventing the termination of the lease or increase of the amount of rent, as well as extending the duration of the

lease termination period. Governments in other countries have also introduced rent freezes and rent subsidies (Tajani, Di Liddo, Guarini, Ranieri i Anelli, 2021).

Metodology

Respondents were surveyed between April and June 2021. The survey conducted focused on young people. An author's survey questionnaire was used. The questionnaire titled Rental Market Preferences addressed to tenants using rental housing in the Lower Silesian province during the study contained nine closed questions. The first seven questions allow analysis of the factors influencing the evaluation of rental market preferences during the pandemic period, and the last two focused on changes in tenant attitudes after a reduction in the rental price and perceptions of the degree of satisfaction with rental property.

This article focuses on the evaluation of the behavior of young people on the housing market during the pandemic period.

The first part of the article diagnoses the reasons for renting (Table 1. factors 1-7), concerns about renting (Table 1. factors 8-14), characteristics of the apartment that affect renting (Table 1. factors 15-27), characteristics of the location affecting renting (Table 1. factors 28-39).

The second part of the article examined the reasons for extending rent (Table 2. factors 1-10), the impact of the pandemic on rent (Table 2. factors 11-21), the availability of support instruments (Table 2. factors 22-26).

In particular, it examined how the pandemic affected rental decisions and which aspects were the most significantly impacted.

In the process of designing the study, the following research hypotheses were formulated:

- . *(H1) The key factor that affects long-term rental use is lack of creditworthiness,*
- . *(H2) A change in personal circumstances (relationship breakdown) affects long-term rental use,*
- . *(H3) There is a relationship between the number of rooms rented and the risk factors that result from the renting,*
- . *(H4) The longer people rented during the pandemic, the less likely they are to be interested in the option offered by the landlord to terminate the lease early,*

.   *(H5) The longer people rented the apartment, prior to transitioning to working or studying remotely during the pandemic, the more often they did not give up their lease.*

Due to the scale used in the questionnaire, the correlation measures and the corresponding significance tests were chosen as appropriate tools for statistical analysis. Statistical methods were used to verify the hypotheses.

The data held, with a five-point rating scale, necessitated the use of Spearman's rank correlation coefficient for tied pairs (Yule i Kendall, 1966). Furthermore, due to the properties of the scale, the Whitney U-Mann test was used in comparative analyses. The U-Mann-Whitney test is a kind of equivalent to the test of means for weaker scales (Smoląg, Szajt i Hajduová., 2023). Calculations were made using Statistica software.

Results and Discussion

In the first step (Table 1), descriptive statistics are presented for variables that are factors of rental market preference.

Table 1. *Rental market preference factors in the questionnaire for tenants who use rental housing during the survey*

Groups of factors	Factors	Mean	Median	Standard deviation	Skewness	Kurtosis
Reasons for using rentals	1. striving to become independent	4,0357	4,0000	0,8692	-1,3269	2,7309
	2.living together with a partner	3,8661	4,0000	0,9909	-1,1402	1,3995
	3.appearance of children	3,3482	3,0000	1,2784	-0,0757	-1,1128
	4.breakup of the relationship	3,5714	4,0000	1,2643	-0,5313	-0,5743
	5.change of place of work or study	4,2946	5,0000	0,9922	-1,8073	3,3935
	6.availability of mortgage loans	2,9821	3,0000	1,1623	0,0002	-0,7399
	7.lack of creditworthiness	3,4375	4,0000	1,4506	-0,4416	-1,1245
Concerns related to renting	8.Covid 19 epidemic	2,4911	3,0000	1,0222	-0,1816	-0,4860
	9.decrease of family income	2,2321	2,0000	0,9584	0,5792	0,0173
	10.risk of termination by the landlord	2,0268	2,0000	0,7408	0,2279	-0,4418
	11.increase in rent	1,9821	2,0000	1,0043	1,3401	1,8741
	12.loss of job or relegation from studies	1,8839	2,0000	1,0288	1,2474	1,0782
	13. force majeure	2,4732	3,0000	0,8378	-0,0544	-0,0861
	14.regulations allowing eviction for payment delays	2,2589	2,0000	0,9177	0,1001	-0,2657

Features of an apartment that affect renting	15.distribution	3,9286	4,0000	0,9272	-1,0300	1,3367
	16.size	4,0714	4,0000	0,8773	-0,9557	0,8903
	17.location	4,4375	5,0000	0,8141	-1,4780	1,6489
	18.common areas	3,1964	3,0000	1,0470	-0,1643	-0,3779
	19. lease price	3,8304	4,0000	1,3076	-0,7627	-0,7860
	20.other lease costs	3,4643	4,0000	1,2870	-0,3326	-1,0844
	21.furnishings	3,9375	4,0000	0,7859	-0,4557	-0,0579
	22.technical standard	4,0714	4,0000	0,8670	-1,0687	1,6833
	23.household appliances and electronics	3,7857	4,0000	0,8640	-0,5921	0,6931
	24.high speed internet	4,1518	4,0000	0,8077	-0,4938	-0,7113
	25.balcony	3,9554	4,0000	0,8636	-0,4259	-0,1303
	26.bicycle/stroller room	3,4196	3,0000	0,8968	-0,3264	0,8904
	27.availability of elevator	3,7321	4,0000	0,9298	-0,6017	0,8054
Features of the location affecting rentals	28.distance to shopping malls	3,6607	4,0000	0,8116	-0,1238	0,0790
	29.distance to work/school	4,2411	4,0000	0,8516	-1,3782	2,1982
	30.proximity to transportation	4,4018	5,0000	0,7034	-1,0665	1,0315
	31.proximity to green areas	4,0714	4,0000	0,8243	-0,5273	-0,3874
	32.proximity to sports and recreational centers	3,6339	4,0000	0,8382	-0,1535	0,4200
	33.close accessibility to commercial and service infrastructure	4,0446	4,0000	0,7520	-0,2031	-0,8254
	34.development in the neighbourhood	3,1696	3,0000	0,9191	-0,0623	0,2785
	35.safety - opinion of the neighbourhood	3,9911	4,0000	0,8542	-1,1307	1,9581
	36.modernity of architecture	3,6250	4,0000	0,8288	-0,2628	0,5643
	37.parking space	3,9107	4,0000	0,8960	-0,3578	-0,3719
	38.closed estate	3,5625	3,0000	0,9279	0,0207	-0,2306
	39.intimacy of development	3,5714	3,0000	0,7909	-0,0727	0,7817

Source: own study.

An analysis of the data presented in Table 1 shows that the average reasons for using rent, according to respondents, are a change in place of work or study – 4.29 with a standard deviation of 0.99 and the desire to become independent – 4.04 with a standard deviation of 0.87. Observing the median, which is not strongly influenced by extreme responses, the highest-rated factor affecting leasing is change of place of work or study – 5.00. In the case of the factor, change of place of work or study, there are more results in the set of observations that are lower than the mean and indicate a skewness of 1.81. Concentration around the mean is for the factor – change of place of work or study, is positive and amounts to 3.39.

According to the respondents, the factors on rental concerns for which the average ratings are high are the Covid 19 epidemic – 2.49 and random situations, 2.47.

In the area of factors regarding concerns about renting, the average ratings are lower than in the other groups of factors. It was observed that concerns about tenancy due to the Covid 19 epidemic are prominent, but the scatter

around the mean is high at – 1.02, compared to a lower deviation value for the factor random situations, where observations are more concentrated around the mean of 0.84.

A preference was observed for the characteristics of a rental apartment, i.e. location and high-speed Internet, for which the average values are the highest. For the characteristics regarding location that influence renting, the average values are highest for proximity to transportation – 4.40 and distance to work or school, 4.24.

To diagnose the relationship between the length of participation in the rental market (in years) and factors that influence the use of rentals, Table 2 shows the values of the Spearman correlation coefficients.

Table 2. *Values of Spearman's correlation coefficients and their significance with respect to the correlation between the length of participation in the rental market and factors influencing rental use*

Factors	R	t$_{(N-2)}$	p
striving for independence	0,122	1,294	0,198
living together with a partner	0,106	1,123	0,264
appearance of children	-0,070	-0,732	0,466
breakup of a relationship	**0,196**	**2,092**	**0,039**
change of place of work or study	0,080	0,837	0,405
availability of mortgage loans	0,113	1,194	0,235
lack of creditworthiness	**0,319**	**3,526**	**0,001**

Note: All statistically significant coefficients are marked in bold font. t$_n$ – the statistic value that tests the significance of the Spearman correlation coefficient for n-2 degrees of freedom

Source: your own study.

From the Spearman correlation values obtained, the factor that is statistically significant is the breakdown of the relationship. This factor affects a longer period of participation in the rental market (r =0.195600). The lack of credit is the other statistically significant factor that affects the longer use of rentals (r =0.318630).

When asked to assess rental risk factors, 26% of the respondents indicated that the covid 19 epidemic negatively affects the decision to rent an apartment, meaning that the epidemic has affected the rental market. At the same time, 56.3% of respondents felt that the epidemic had no impact on rental decisions. Only 8% of the respondents indicated that the pandemic

supported or positively influenced rental. Therefore, it can be assumed that the expectation of a decrease in rents or a greater availability of rental units as a result of the pandemic is not confirmed.

It turned out that the pandemic was perceived as a threat in the rental market on a par with or similar basis to factors such as income decrease (23.2% of responses), risk of termination (24.1%), or regulations allowing eviction for payment delays (25.9%).

Significant in the results of the survey on the rental market among young people is the fact that as much as 43.8% of respondents perceived that the loss of a job negatively affects renting, and as much as 36.6% discourage this fact. A high percentage of such responses among young people may indicate that the pandemic has sharpened their perception of risks. The concerns about renting were verified against the correlation between the number of rooms rented in Table 3.

Table 3. *Values of the Spearman correlation coefficients and their significance for the correlation between the number of rooms rented and the risk factors that cause concern about renting*

Factors	R	$t_{(N-2)}$	p
Covid 19 outbreak	**0,203**	**2,179**	**0,031**
impoverishment of family income	**0,201**	**2,148**	**0,034**
risk of termination by the landlord	**0,192**	**2,051**	**0,043**
increase in rent	0,070	0,733	0,465
loss of job or relegation from studies	0,179	1,908	0,059
chance events	0,100	1,057	0,292
regulations allowing eviction for payment arrears	0,062	0,653	0,515

Note: All statistically significant coefficients are marked in bold font.
t_n – the statistic value that tests the significance of the Spearman correlation coefficient for n-2 degrees of freedom

Source: your own study.

From the Spearman correlation values obtained, it can be seen that as the threat of the Covid 19 epidemic increases, the correlation between the perception of the threat of the Covid 19 epidemic and the size of the apartment is apparent (r =0.203420). Tenants renting large apartments feel a greater threat of the Covid 19 epidemic.

Based on Table 3, analyzing the correlation relationship between the threat of impoverishment of family income and the number of rooms rented, it was observed that the larger the apartment, the greater the feeling of threat (r =0.200632).

One more threat factor, the risk of termination by the landlord statistically significantly depends on the number of rooms rented. Here, too, the larger the apartment, the greater the sense of threat of the possibility of termination by the landlord (r =0.191962). Table 4 shows the values of the Mann-Whitney test for the evaluation of the threat that causes concerns of tenancy depending on the number of rooms rented.

Table 4. *Mann-Whitney test values for assessing risks that cause rental concerns according to the number of rooms rented*

Age groups	Measure	epidemic Covid 19	Impoverishment of family's income	Risk of landlord's termination	Increase in rent	Loss of job or relegation from college	Random situations	Regulations allowing eviction for arrears of payment
1 room/2 rooms	Z	-1,408	-0,940	-0,409	-0,231	0,076	-1,708	0,297
	p	0,159	0,347	0,683	0,817	0,939	0,088	0,766
1 room/3 rooms	Z	-0,767	-0,957	-1,118	-0,669	-0,885	-1,128	-0,772
	p	0,443	0,338	0,263	0,504	0,376	0,259	0,440
1 room/3 rooms	**Z**	**-2,731**	**-2,157**	-1,751	-0,454	-1,654	-1,205	-0,121
	p	**0,006**	**0,031**	0,080	0,650	0,098	0,228	0,903
2 rooms/3 rooms	Z	0,320	0,000	-0,924	-0,732	-1,075	0,296	-1,264
	p	0,749	1,000	0,355	0,464	0,283	0,767	0,206
2 rooms/above 3 rooms	Z	0,320	0,000	-0,924	-0,732	-1,075	0,296	-1,264
	p	0,749	1,000	0,355	0,464	0,283	0,767	0,206
3 rooms/above 3 rooms	Z	-1,441	-1,610	-0,725	0,225	-0,593	-0,135	0,664
	p	0,149	0,107	0,468	0,822	0,553	0,893	0,507

Note: All statistically significant coefficients are marked in bold font.
Source: your own study.

Analyzing the results of the Mann-Whitney test, it can be concluded that those who own apartments with more than 3 rooms feel significantly more at risk of the Covid 19 epidemic (Z =-2.731; p =0.006) and the impoverishment of family income (Z =-2.157; p =0.031).

The next step (Table 5) assesses and analyzes the key factors that determine the choice of rental housing according to the duration of participation in the rental market.

Table 5. *Values of Spearman's correlation coefficients and their significance in relation to the length of participation in the rental market and the evaluation of key factors determining the choice of rental housing*

Factors	R	$t_{(N-2)}$	p
distribution	0,128	1,350	0,180
size	0,067	0,705	0,482
location	-0,139	-1,472	0,144
common areas	**0,199**	**2,128**	**0,036**
lease price	-0,110	-1,159	0,249
other lease costs	-0,050	-0,522	0,603
furnishings	-0,155	-1,650	0,102
technical standard	0,046	0,480	0,632
household appliances and consumer electronics	**-0,245**	**-2,650**	**0,009**
high-speed internet	-0,069	-0,727	0,469
balcony	0,107	1,133	0,260
space for bicycles or strollers	0,098	1,038	0,302
availability of elevator	-0,004	-0,038	0,970

Note: All statistically significant coefficients are marked in bold font.

t_n – the statistic value that tests the significance of the Spearman correlation coefficient for n-2 degrees of freedom

Source: your own study.

Diagnosing the correlations of the perceptions of the key factors that determine the choice of housing by renters who are likely to have considered the expected quality of housing when making their choice takes into account the factors (Table 6). Analyzing the correlation relationship between the factor common areas, it was observed that the longer the time of renting an apartment, the greater the need for common areas (r =0.198827). On the other hand, the correlation relationship between household appliances and electronics and the duration of renting an apartment (r =-0.244955) is the opposite. Those who have been renting for a long time do not rank household appliances and electronics equipment as a key factor. The longer respondents lived in a rented apartment, the less they care about household appliances and RTV equipment.

The second part of the article presents descriptive statistics for variables that are factors in preferences to stay in the rental market during the pandemic (Table 6).

Table 6. *Descriptive statistics for the preference of factors influencing staying in the rental market diagnosed using a questionnaire for tenants using rental housing during the survey*

Groups of factors	Factors	Mean	Median	Standard deviation	Skewness	Kurtosis
Rental extensions	1.own family income	3,7054	4,0000	0,8557	-0,9705	1,4877
	2.rent subsidy financed by Covid 19 fund	3,4196	3,0000	0,8235	-0,2307	0,8781
	3.stability of employment	4,0000	4,0000	0,8490	-0,7196	0,5786
	4.relationship with the landlord or property manager	4,0357	4,0000	0,7343	-0,4730	0,1369
	5.change in the amount of rent	2,8393	3,0000	1,1972	0,4125	-0,8294
	6.amount of advance payments, for example, for utilities	2,8661	3,0000	1,1350	0,3433	-0,7970
	7.terms of the contract	3,6339	4,0000	0,9299	-0,2291	-0,4584
	8.convenience	4,1607	4,0000	0,6375	-0,5741	1,2566
	10.relationship with neighbors	3,5804	4,0000	0,8344	-0,2122	0,4747
Impact of the pandemic	11.amount of rent	2,8304	3,0000	1,0124	-0,0756	-0,3000
	12.availability of apartments	3,4554	4,0000	0,9481	-0,7090	0,6602
	13.terms of contract renewal	3,1518	3,0000	0,7735	-0,3891	1,0519
	14.possibility of early termination of the contract	3,3750	3,0000	0,9784	-0,2296	0,3348
	15.possibility of rewriting the contract to another tenant	3,3661	3,0000	0,8699	0,0455	0,5158
	16.government subsidies for rent	3,2411	3,0000	0,9324	-0,4341	0,8178
	17.quality of cooperation with the landlord	3,6339	4,0000	0,8053	-0,4995	0,9289
	18.demand in the market	3,1161	3,0000	0,8673	-0,0597	0,2822
	19.supply in the market	3,3125	3,0000	0,9008	-0,4374	0,8278
	20.loss of work	2,1607	2,0000	1,0531	0,4726	-0,4221
	21.transition to remote work/learning	2,7054	3,0000	1,0958	0,2766	-0,2366
Support instruments available	22.level of knowledge of support instruments	2,2500	2,0000	1,0946	0,5770	-0,3328
	23.the level of matching the terms of government rent subsidies, for the needs of the tenant	2,1071	2,0000	1,0254	0,6495	-0,2511
	24.level of matching the terms of government subsidies to rent, for the needs of the landlord	2,2054	2,0000	1,0999	0,4916	-0,7548
	25.level of knowledge of the law	2,5268	2,0000	1,1147	0,3885	-0,5012
	26.individual assistance from the landlord	2,6964	3,0000	1,1843	0,0824	-0,8731

Source: your own study.

Analysis of the data presented in Table 6 shows that the most common reasons for extending a lease are the relationship with the landlord or property manager – 4.04 with a standard deviation of 0.73 and job stability – 4.00 with a standard deviation of 0.85. Neither the rent subsidy financed by the Covid 19 fund – 3.42 nor the change in rent 2.84 was a significant factor in extending a lease. Respondents were observed to indicate that the pandemic increased housing availability – 3.46, the possibility of rewriting the contract to another tenant – 3.37 and improved the quality of cooperation with landlords – 3.63. The level of knowledge of tenant support instruments in the pandemic is low and the factor of the level of matching the terms of the government rent subsidy to the tenant's needs was rated the lowest – 2.10.

Interesting conclusions arise from the assessment of the factor, the impact of the pandemic on rent. It turns out that with regard to most factors, respondents indicated that the impact of the pandemic was insignificant, in particular: on lease renewal terms (57.1%), government rent subsidies (53.6%), on market demand (50.9%), or on market supply (50%). However, a deeper analysis of the responses related to these answers provides additional information. For example, with regards to the terms of contract renewal, the majority indicated that the pandemic had a neutral impact. 29.5% indicated that the pandemic supported or positively influenced the terms of contract renewal. Similar conclusions can be drawn regarding the impact of the pandemic on supply in the rental market, 50% indicated that the impact was neutral, however 39.3% indicated that the impact was positive. These conclusions stand somewhat in contrast to the results of evaluating the impact of the pandemic on rent, 43.8% of respondents indicated that the pandemic was insignificant, however, as many as 33% indicated that the impact was negative, while about 23% indicated that the impact was positive. If 29.5% indicated that the pandemic positively impacted contract renewal terms and 39.3% said that the pandemic positively affected market supply, then why did 1/3 indicate that the pandemic affected rent growth? Especially since, in response to the assessment of housing availability as a result of the pandemic, 42.9%, the largest number of responses, indicated that the pandemic was supportive, and adding 9.8% of responses that it was definitely supportive, that is, 52.7% indicated that the pandemic positively affected housing availability. Additionally, as many as 47.3% of

the respondents indicated an improvement in the quality of cooperation with the landlord, 11.6% indicated a strongly positive impact. 58.9% of the respondents noted a positive impact on the quality of cooperation with the landlord, meaning that the landlord, perceiving a worse outlook for his business, tried harder. If respondents felt greater accessibility and improvement in the quality of cooperation with the landlord and taking into account the previous considerations, one would even expect an adjustment in rents, but this did not happen. However, perhaps the increase in inflation meant that despite the greater difficulty of renting, rents perceived by the respondents did not decrease.

Table 7. *Values of Spearman's correlation coefficients and their significance in relation to the length of participation in the rental market and the assessment of factors affecting the impact of the pandemic on renting accommodation*

Factors	R	$t_{(N-2)}$	p
amount of rent	0,086530	0,91095	0,364313
availability of housing	-0,043702	-0,45879	0,647287
contract renewal terms	0,002738	0,02872	0,977144
possibility of early termination of the contract	**-0,250700**	**-2,71610**	**0,007673**
possibility of transferring the contract to another tenant	-0,115419	-1,21867	0,225576
government subsidies to the rent	0,043961	0,46152	0,645339
quality of cooperation with the landlord	-0,046453	-0,48773	0,626708
demand in the market	0,053891	0,56603	0,572524
supply in the market	-0,009685	-0,10158	0,919271
loss of work	0,114398	1,20774	0,229736
transition to remote work	**0,196560**	**2,10255**	**0,037786**

Note: All statistically significant coefficients are marked in bold font.
t_n – the statistic value that tests the significance of the Spearman correlation coefficient for n-2 degrees of freedom
Source: your own study.

Analyzing the correlation between the possibility offered by landlords to terminate the contract early during the pandemic, it was observed that the longer the time it took to rent the apartment, the less often the contract was terminated early during the pandemic (r =-0.2507). The longer people rented an apartment, the less interested they were in the possibility of early termination.

The longer individuals rented an apartment, the more often they did not terminate their lease (r =0.196560).

Conclusions

The SARS-CoV-2 virus has, in some sense, brought daily life to a halt, as it had been known until now. Remote work has been introduced, universities have closed, and people just starting their studies have faced serious choices regarding the need to rent an apartment for the duration of their studies. This is a very unique situation that raises several important questions (Dąbrowski, 2021). For those working and studying or just working, the pandemic has affected the choice of rental housing (they has more choices, perhaps a higher standard, a better location, or simply a lower price). Young people who came to big cities to study faced the dilemma of whether to stay or return to the family home. For young people who came to large academic cities to find work and relocate, it was not an easy time given the restrictions put in place and the lower incomes in many industries. It was definitely easier for young people who had already graduated from college or were about to graduate and who had already taken their first steps in the job market before the pandemic.

On the basis of the research conducted, some interesting conclusions can be drawn about the preference for long-term rental housing by young people during the pandemic period. Factors influencing long-term rental use include changes in personal circumstances and lack of creditworthiness. During the pandemic period, the number of divorces in Poland increased from 13.4 per 10,000 people in 2020 to 15.9 in 2022 (Demographic Yearbook, 2023). The research was carried out in the cities of the Lower Silesian province, which is mainly populated by young people living away from the family home, unable to nest with their parents after the breakup of a relationship. Research shows that lack of creditworthiness forces young people to rent apartments. Furthermore, according to a survey of graduate students in Poland, they plan to purchase real estate in the future, with nearly 60% of respondents intending to finance the purchase with a mortgage (Konieczna i Konar, 2023).

The methodology used allowed us to verify the relationship between the number of rooms rented and the rental risk factors, thus confirming the validity of the research hypothesis. People who own apartments with more than 3 rooms feel significantly more at risk from the Covid 19 epidemic, compared to those living in a rented single room. In the study, it was also observed that

people who have been renting longer pay attention to the need for common space and care less for household appliances and electronics. In a study conducted in six major Italian cities by F. Tajani, satisfaction, mental and physical health, and quality of life in the pandemic were observed to be improved by increasing greenery in housing, outdoor living spaces, balconies, and terraces. The results obtained from the study also confirm that the space in the apartment for all members of the household in the pandemic is important. Renting out all the rooms in an apartment can result in a lack of adequate common space for household members (Tajani, Di Liddo, Guarini, Ranieri i Anelli, 2021).

Changing demand in the housing market and assessing the impact of abnormal events such as the pandemic on changing market preferences showed that De Toro's study indicated demand for *new spaces*: open space (53%), leisure spaces (33.1%), and smart work spaces (23.4%). (De Toro, Nocca i Buglione, 2021). A factor influencing demand in the real estate market prior to the pandemic was the location of the apartment or house, but research conducted in Poland also confirms that there has been a shift in preference for more rooms, the ability to access additional rooms, high-speed Internet and digital platforms (Kocur-Bera, 2022).

It was observed that the pandemic did not affect the early termination of contracts by people who have been renting an apartment for a long time. People who have been renting an apartment for a long time were less likely to resign during the pandemic period. In summary, during the pandemic period, there were changes in the perception of factors affecting apartment rental. The factors diagnosed through the use of research methods can be used by landlords and those involved in housing policy for young people.

References

Allen-Coghlan, M. i McQuinn, K. M. (2021). The potential impact of Covid-19 on the Irish housing sector.

Anderson, M. i Jingjing, J. (2018). Teens, social media & technology . *Pew research center*, strony 1673-1689.

Balemi, N., Füss, R. i Weigand, A. (2021). COVID-19's impact on real estate markets: review and outlook. *Financial Markets and Portfolio Management* , strony 1-19.

Balemi, N., Roland Füss, N. i Weigand, A. (2021). COVID-19's impact on real estate markets: review and outlook. *Financial Markets and Portfolio Management*, strony 1-19.

Barbuscia, A., Pailhé, A. i Solaz, A. (2023). Do Income and Employment Uncertainty Affect Couple Stability? Evidence for France During the COVID-19 Pandemic. *European Journal of Population.*, str. 39.1.19 .

Chowdhury, P., Paul, S., Kaisar, S. i Moktadir, M. (2021). COVID-19 pandemic related supply chain studies: A systematic review. *Transportation Research Part E: Logistics and Transportation Review*, str. 102271.

Cifuentes-Faura, J. (2021). Influence of Economic and Political Variables on the Mortality Rate per Covid-19. *European Research Studies*, pp. 62-67.

Czerwińska, M. i Czerwiński, D. (2021). Behavioural Intentions for Health by the Z Generation: A Fuzzy Cognitive Maps Analysis . *European Research Studies Journal*, strony 24(Special 2), 99-111.

D'Lima , W. i Thibodeau, M. (2023). Health crisis and housing market effects-evidence from the US opioid epidemic. *The Journal of Real Estate Finance and Economics*, strony 67(4), 735-752.

Dąbrowski. (2021). *https://elsa.org.pl/note/koronawirus-a-najem-kevin-dabrowski.*

De Toro, P., Nocca, F. i Buglione, F. (2021). Real Estate Market Responses to the COVID-19 Crisis: Which Prospects for the Metropolitan Area of Naples (Italy)? . *Urban Science*, strony 5(1):23.

Del Giudice, V., Pierfrancesco, D. i Del Gi, F. (2020). COVID-19 infects real estate markets: Short and mid-run effects on housing prices in Campania region (Italy). *Social sciences*, strony 9(7), 114.

Demographic Yearbook. (2023).

Derkacz, A. i Gajda, A. (2023). Preferencje najemców mieszkań w Polsce. *NBP*.

D'Lima, W., Lopez, L. i Pradhan, A. (2022). COVID-19 and housing market effects: Evidence from US shutdown orders. *Real Estate Economics*, strony 50(2), 303-339.

Donthu, N. i Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research,*, strony 117, 284–289. doi: https://doi.org/10.1016/j.jbusres. (2020.06.008).

Gdakowicz, A., Putek-Szeląg, E. i Bas, M. (2023). Duration of the Rental Offer for Residential Property. *Real Estate Management and Valuation* , strony 82-91.

Karpen , I. i Conduit, J. (2020). Engaging in times of COVID-19 and beyond: theoriz-ing customer engagement through different paradigmatic lenses. *Journal of Service Management 31.6 (2020): 1163-1174*, strony 1163-1174.

Kocur-Bera, K. (2022). Impact of the COVID-19 Pandemic Era on Residential Property Features: Pilot Studies in Poland . *International Journal of Environmental Research and Public Health*, str. 19(9.

Konieczna, P. i Konar, N. (2023). Real Estate Market Perceptions, Housing and Investment Plans of Students and Graduates. *Real Estate Management and Valuation*, strony 52-65.

Kuk, J., Schachter, A., Faber, J. i Besbris , M. (2021). The COVID-19 pandemic and the rental market: Evidence from Craigslist. *American Behavioral Scientist* , strony 65. 12,1623-1648.

Liu , S. i Su, Y. (2021). The impact of the COVID-19 pandemic on the demand for density: Evidence from the US housing market. *Economics letters*, strony 207, 110010.

McKibbin, W. i Fernando, R. (2020). *The economic impact of COVID-19.* London: Richard Baldwin & Beatrice Weder di Mauro,CEPR Press.

Morris, A., Hulse, K. i Pawson, H. (2021). Housing Pathways of Provate Renters-Rebounds,Block-ages and Dead Ends. *The Private Rental Sector in Australia:Living with Uncertainty*, strony 69-85.

Nazarczuk, J., Cicha-Nazarczuk, , M. i Szczepańska, K. (2022). Wrażliwość polskiej gospodarki na zmiany wywołane pandemią COVID-19. *IBG, Olsztyn*.

Niewczas-Dobrowolska, M. (2021). Wpływ pandemii COVID-19 na zachowania konsumentów na rynku żywności The impact of the COVID-19 pandemic on con-sumer behaviour in the food market. SPOŁECZ-NO-EKONOMICZNE SKUTKI PANDEMII COVID-19. *Żywność. Nauka.Technologia.Jakość.*

Priyabrata, C., Sanjoy Kumar, P., Kaisar, S., & Moktadir, M. (2021). COVID-19 pan-demic related supply chain studies: A systematic review., *Transportation Research Part E: Logistics and Transportation Review*, pp. 148, 102271.

Radoslaw, T., Gluszak, M., Hebczynski, M. i Tanas, J. (2021). The COVID-19 pandemic, Airbnb and housing market dynamics in Warsaw. *Critical Housing Analysis*, strony 8(1), 72-84.

Sadowy, M. (2020). *https://kruczek.pl/koronawirus-a-najem-w-polsce/ [dostęp 20.09.2021].*

Samuk, G. i Sidorowicz, I. (2021). Wpływ pandemii COVID-19 na zachowania kon-sumentów. *Akademia Zarządzania*.

Sheth, J. (2020). Impact of Covid-19 on consumer behavior: Will the old habits return or die? *Journal of business research* , strony 280-283.

Smoląg, K., Szajt, M. i Hajduová., Z. (2023). The use of social media by Polish and Slovak students and their digital competences. *Procedia Computer Science* , strony 1211-1220.

Tajani, F., Di Liddo, F., Guarini, M., Ranieri, R. i Anelli, D. (2021). An Assessment Methodology for the Evaluation of the Impacts of the COVID-19 Pandemic on the Italian Housing Market Demand . *Buildings* , strony 11(12), 592.

Tomal, M. i Marona, B. (2021). The impact of the covid-19 pandemic on the private rental housing market in poland: What do experts say and what do actual data show? *Critical Housing Analysis* , str. 8.1: 24.

Waligóra, T. (2021). *https://bankomania.pkobp.pl/finanse/kredyty-i-pozyczki/czas-na-domowe-sprawy-czyli-czy-inwestowac-w-nieruchomosci/ [dostęp 20.09.2021].*

Yörük , B. (2020). Early effects of the COVID-19 pandemic on housing market in the United States. *Available at SSRN 3607265.*

Yule, G. i Kendall, M. (1966). *Wstęp do teorii statystyki, tłum. B. Górecki, E. Vielrose.*