

2020, Vol. 8, No. 4

OPEN ORCESS 10.15678/EBER.2020.080412

The COVID-19 pandemic impact upon housing brokers' workflow and their clients' attitude: Real estate market in Krakow

Bartłomiej Marona, Mateusz Tomal

ABSTRACT

Objective: The objective of the article is to assess the impact of COVID-19 pandemic upon the workflow of real estate brokers and their clients' attitude as exemplified by the real estate market in Krakow.

Research Design & Methods: For the purpose of assessing the impact of COVID-19 pandemic upon the aspects of the real estate market under consideration, a survey questionnaire with open-ended questions was distributed amongst all the real estate brokers associated in the Małopolska Real Estate Brokers Association.

Findings: The findings indicate that the COVID-19 pandemic has had a considerable impact upon the workflow of real estate brokers and their clients' attitude. The real estate brokers began to render online services to a greater extent, thus they intensified the use of digital technologies in running their businesses. On the other hand, their clients like landlords in numerous cases changed their strategies, i.e. from short-term rental into the long-term one. In turn, tenants began to demand lower rents and higher standards of apartments.

Implications & Recommendations: The conducted studies have made it plausible to state that the COVID-19 pandemic has had a significant impact upon the real estate market. However, it bears noting that we do not conclude to what extent those changes are permanent, therefore the need for further studies.

Contribution & Value Added: This article counts among the first ones in the world to address the issue of COVID-19's impact upon the housing market.

Article type:	research article		
Keywords:	housing market; COVID-19; SARS-CoV-2; realtor; housing preferences		
JEL codes:	D22, D23, H12, R00		
Received: 1 September 2020		Revised: 22 September 2020	Accepted: 28 September 2020

Suggested citation:

Marona, B., & Tomal, M. (2020). The COVID-19 pandemic impact upon housing brokers' workflow and their clients' attitude: Real estate market in Krakow. *Entrepreneurial Business and Economics Review*, 8(4), 221-232. https://doi.org/10.15678/EBER.2020.080412

INTRODUCTION

As of September 22, 2020, the COVID-19 pandemic has caused over 960,000 deaths and more than 31 million confirmed cases all over the world (Johns Hopkins Coronavirus Resource Center, 2020). The outbreak of COVID-19 has influenced almost all the aspects of human life (Zahra, 2020; Ratten, 2020a, 2020b; Liguori & Winkler, 2020) and has completely changed the economic environment (Kuckertz *et al.*, 2020; Kufel, 2020; Korzeb & Niedziółka, 2020). In particular, as Nicola *et al.* (2020) note, the emergence of coronavirus may be considered in the context of the effect upon primary, secondary, and service sectors. The last of the three includes the housing market, which has been impacted by the novel pandemic in many aspects. The immediate influence of COVID-19 pandemic upon the housing market mostly refers to the occupation of professionals operating in that market, along with its specific segment, i.e. the rental housing market. Let us note that – until now – no scientific research has been conducted to the extent of the aforementioned aspects. Furthermore, the objective of the article is to assess the impact of COVID-19 pandemic upon the workflow of real estate brokers and their clients' attitude as exemplified by the real estate market in Krakow.

Taking into account the abovementioned goal, this article will provide answers to the following research questions:

- **RQ1:** Has the COVID-19 pandemic had a considerable impact upon the operations of house brokers? If there were significant changes in the workflow of real estate brokers, what were those changes? Has the emergence of COVID-19 extended the time of online work in the case of real market professionals and caused the digitalisation of real market brokers?
- **RQ2:** Has the COVID-19 pandemic changed the attitude of rental housing market participants? Is the change in tenants' preferences and, on the other hand, in landlords' strategies particularly noticeable?

This study contributes to the development of relevant existing literature in several ways. This article counts among the first ones in the world to address the issue of the impact of COVID-19 upon the housing market. Secondly, this article presents a synthetic overview of the scientific research conducted hitherto at a boundary between the COVID-19 pandemic and the housing market. Moreover, this article depicts unique studies conducted to the extent of the change in the workflow of real estate brokers, but also in the change in landlords' and tenants' attitude in the housing market as a result of the COVID-19 pandemic.

The rest of this paper is organised as follows. The next section provides a literature review on the impact of the COVID-19 pandemic on the housing market. The methodology of the research is then presented, followed by the results of the analysis and their discussion. The last section contains the main conclusions and limitations of this study and directions for future analyses.

LITERATURE REVIEW

The impact of COVID-19 pandemic upon the housing market has not been comprehensively analysed in the scientific literature until now. However, we did find some articles which attempt to analyse the impact of COVID-19 pandemic upon the housing sector. All the studies conducted hitherto may be grouped thematically in reference to the following issues:

- 1. housing prices,
- 2. homelessness,
- 3. housing architecture,
- 4. private sector of the rental housing market,
- 5. bank borrowing as the funding source of housing transactions,
- 6. residential property sale transactions.

Housing Prices and the COVID-19 Pandemic

Let us note that as far as the impact of COVID-19 pandemic upon the housing market is concerned, the issue of residential property prices prevails in the press. However, due to the unavailability of data, only one credible scientific research was conducted in this area. The research concerned the impact of COVID-19 pandemic on housing prices in Italy (Del Giudice, 2020). The results of the study show that the emergence of coronavirus did not cause a sharp fall in property prices, which oscillated around 4-7%. Other preliminary expert analyses also indicate that the occurrence of COVID-19 pandemic has not brought about considerable changes in the dynamics of prices in the housing market (Bloom, 2020; Glapiak, 2020).

Homelessness and the COVID-19 Pandemic

The issue of homelessness against the background of COVID-19 pandemic has been highlighted, among others, by Mendes (2020). According to this author, during the COVID-19 pandemic, urban social movements intensified to demand housing for everyone because only this way might the obligation of social isolation be fulfilled. A similar topic was addressed by Morgan (2020) who claims that the mechanism of social distancing as a tool for reducing the infection rate is not effective in numerous countries (e.g. in Ghana) due to the prevalence of homelessness and very poor housing conditions amongst the substantial part of the society. The aforementioned issue further considered within the framework of research conducted by Benavides and Nukpezah (2020), who note that in order for the needs of the homeless to be satisfied effectively during the COVID-19 pandemic, officials must cooperate at all the levels of public institutions.

Housing Architecture and the COVID-19 Pandemic

Scientists also highlight that the COVID-19 pandemic makes it necessary to redesign existing residential buildings and to design new residential buildings in a specific manner. D'Alessandro *et al.* (2020) focus on the lockdown period when people were forced to remain at home for a longer time. The authors note that this was a period that caused a deterioration of the society's health condition in terms of non-infectious diseases such as cardiovascular diseases, diabetes, or mental disorders from the more sedentary lifestyle, higher consumption of food and beverages, tobacco smoking, and drug abuse. Furthermore, D'Alessandro *et al.* (2020) emphasise that virus transmission in result of intrahousehold transmission is still another problem caused by the lockdown period, which resulted from the inadequate housing construction and the lack of necessary equipment, e.g. an air exchange system. Taking the above into consideration, the Authors have put together a set of recommendations regarding healthy, safe, and sustainable housing that could respond to the present and future pandemics and the problems they engender. Those recommendations were issued in seven areas: (i) the accessibility of green spaces and natural environment for residents, (ii) building design characteristic of easy adaptability, (iii) housing space of high thermal comfort and air quality, (iv) water consumption and wastewater treatment management, (v) solid waste disposal management, (vi) the automation of residential buildings, (vii) the use of innovative building units in order to reduce the quantity of bacteria and viruses on surfaces. In turn, Fezi (2020) postulates for residential building design to be based on the so-called Intermediate Housing, according to which multi-family buildings should ensure a separate entrance for every apartment. Hence, virus transmission could be restricted more in result of the actual separation of residents in a given building, which is impossible in a typical multi-family building due to shared entrances that may become contaminated.

The Private Sector of Rental Housing Market and the COVID-19 Pandemic

The COVID-19 pandemic considerable impacted the private sector of rental housing market. The adverse impact of coronavirus has been and still is experienced mostly by landlords who rent out their property for short periods of time. This mostly results from the fact that in some of the countries, that type of property rental has been suspended. Furthermore, people continue to fear the possible virus threat, which makes them postpone their tourist or business plans. As far as tenants' viewpoint is concerned, we should note that the COVID-19 pandemic has undoubtedly caused difficulties in paying rent for some due to the turmoil in the labour market. As Maalsen *et al.* (2020) note, in some of the countries e.g. in the United Kingdom, Australia, or the United States of America, governments decided that tenants may defer their accounts payable until the situation returns to normal. Furthermore, Maalsen *et al.* (2020) emphasise that the time of COVID-19 pandemic is a unique period during which tenants and scientists may draw attention and obtain widespread feedback on systemic problems of the private sector in the rental housing market.

Bank Borrowing as the Funding Source of Housing Transactions and the COVID-19 Pandemic

The current coronavirus pandemic has had a considerable impact upon the approach of banks to borrowing as the funding source of housing transactions. As Nicola *et al.* (2020) note, UK banks have begun to claim substantially higher contributions from borrowers in order to extend a loan. In a number of countries, the so-called loan repayment holidays have been offered for borrowers who have found themselves in a poor financial standing as a result of COVID-19 pandemic.

Residential Property Sale Transactions and the COVID-19 Pandemic

The issue of property sale transactions is still another aspect that has been come across within the framework of the scientific research conducted in light of the COVID-19 pandemic. The pandemic has undoubtedly reduced the number of face-to-face meetings arranged for the purpose of showing residential property offered for sale. Instead, real estate brokers have begun to use modern technologies such as FaceTime or Skype to a greater extent in order to show online property to interested persons (Nicola *et al.*, 2020; Koszel, 2020).

Conclusion

We should note that the aforementioned studies on the issue of COVID-19 pandemic and the housing market should be continued. After all, these analyses insufficiently stem from objective quantified figures or questionnaire-based surveys and, in the majority of cases, they exclusively display authors' opinions. Furthermore, the COVID-19 pandemic continues, and the second wave of infections occurred in the fourth quarter of 2020. Thirdly, the housing market usually responds to external stimuli with a delay, which is why changes in this market are visible only after some time; i.e. we should expect the pandemic to impact prices.

RESEARCH METHODOLOGY

For the purpose of conducting the intended study, a survey questionnaire with openended questions was distributed by means of a Google form amongst all the real estate brokers associated in the Małopolska Real Estate Brokers Association, i.e. 226 persons. The questionnaire consisted of five closed-ended questions and two comprehensive openended questions. Within the context of the presented findings, the respondents were asked questions that read as follows:

- 1. How and whether did the workflow of the Real Estate Office that you are employed in change under the influence of COVID-19 pandemic? If it did, may the changes be permanent, i.e. may they continue in the office after the pandemic is over?
- 2. Have you noticed the impact of COVID-19 pandemic upon (1) the change in tenants' preferences and (2) landlords' strategies in the housing market in Krakow?

The above questions were to reveal respondents' views on changes in the workflow of real estate offices that process transactions concluded in Krakow housing market in result of the COVID-19 pandemic, but also to identify the changes in their clients' preferences and attitudes. The other context was driven by the focus on the rental housing market due to the direct and immediate impact of COVID-19 pandemic upon that segment of the market; e.g. the sudden stagnation in the short-term rental market and the premature termination of rental agreements by students and staff members affected by the pandemic to the greatest extent.

The inclusion of open-ended questions allowed us to derive some typical benefits that in principle arise from qualitative analyses; among other things, they mostly referred to the possibility of the in-depth presentation of worldviews.

The first dispatch was arranged for 23 July 2020 and the second one – on 28 July 2020. The final output was 22 responses from – in most cases – real estate brokers with considerable experience in the real estate market; only one respondent had experience from three to five years, while the rest had over 10 years of experience (15 brokers) or from six to 10 years. Detailed characteristics of the group of respondents are presented in Table 1.

Notwithstanding the low response rate of 9.73%, the study may be considered credible. Firstly, surveys among enterprises are characteristic of a substantially lower response rate compared to other kinds of respondents, such as local municipalities. Secondly, the analysis conducted by Holbrook *et al.* (2008) proves that surveys with a low response rate are marginally less accurate than those with a high response rate. The low response rate

is also mentioned in Pilař *et al.* (2018). At the same time, we should note that considering the survey questionnaire was addressed to real estate offices that process only transactions in the housing market in Krakow, we may state that the real response rate has been higher. That is, a part of real estate offices associated in the Małopolska Real Estate Brokers Association do not process transactions in the Krakow market or do not specialise in residential property trade, focusing on parcels of land or commercial property.

Variable	Variable values	Proportion of the Sample Response (%)
Sex/Gender	Male	54.50
	Female	45.50
Experience	3-5 years	4.50
	6-10 years	27.30
	above 10 years	68.20

Table 1. Characteristics of the group of respondents

Source: own study.

RESULTS AND DISCUSSION

Our study indicates that in over 70% of cases, the workflow of real estate offices has changed in result of the COVID-19 pandemic. The changes aim at maximum precaution measures to ensure the utmost safety of staff members and clients of real estate offices, which entails imposing stricter safety rules and broader IT use in order to limit the number of face-to-face contacts. The answers often repeated, as in the case of one of the respondents saying, 'we care about the safety of staff members and clients (masks, antibacterial gels, etc.).' Another respondent noted that 'the changes in the period from March till May 2020 related to the necessity to disinfect and cover one's mouth and nose or wear gloves, which are currently less frequently practised.' Furthermore, many responses referred to the issue of reducing the number of both client and staff team meetings to the absolute minimum. One of the responses included the following statement: 'in the office we only make appointments with clients, we work online.' Another answer included the following statement: 'a substantial part of work occurs online. The first presentation of an apartment happens online. Team meetings have been moved to the Internet.' Furthermore, the answer is very often that real estate agents are more cautious about direct contacts with clients, limiting them to those meetings that are more likely to be successful (i.e. commencement of a rental agreement, preliminary agreement, etc.). Within this context, one of the brokers stated that 'a more selective approach to the client as far as a face-to-face meeting is concerned will certainly translate into a larger volume of transactions and time saving.' Still another respondent answered as follows:

I am trying to make more arrangements online before an on-site meeting; e.g. I always provide the client with a website link to the property offered for sale or photographs of an apartment. I don't make on-site appointments in respect of a real estate that a client has not seen online before – even when a sale offer is not ready yet, I e-mail a client to verify any potential interest. I ask a client more questions before a meeting in order to limit redundant meetings to the minimum.

Here, we reach an important point, namely the change in clients' attitude noted by one of the surveyed brokers, who observed 'an increase in the number of exclusive right-to-sell agreements. I hope the changes will be permanent.' Such an answer implies that a part of clients also reduce the number of face-to-face contacts with real estate brokers during the pandemic, while attempting to sell or rent out an apartment via one real estate broker and not via many competing brokers, which is most often practised in Poland. The aspect of decreasing occupational involvement in face-to-face contacts among professionals in the real estate market is also noted by Koszela (2020) who – having conducted a study on the impact of COVID-19 pandemic upon the real estate market in Poland – informs that over 60% of respondents devote much more time to online work in result of the emergence of COVID-19.

Still another response of the surveyed broker draws attention to a different important aspect: 'we launch video talks, for instance, via Zoom, within the framework of both regular talks with staff members and talks with clients, in order to reduce the number of face-to-face meetings and mitigate the risk of infection, which at the same time saves us time and money spent on commuting.' Here appears the issue of using the IT to a greater extent for the purpose of daily work at a real estate office. The pandemic has undoubtedly made it necessary to use advanced technologies on a greater scale also among the specialists who operate in the housing market. Solutions such as video talks, virtual walks, or online agreement commencement – though known before the pandemic - are now standard arrangements in daily work of more and more real estate broker offices. Therefore, it is not surprising that the answers given by the respondents were: 'for the benefit of those interested, we use such IT tools as WhatsApp, Skype, Messenger, etc., for the purpose of presenting a real estate online. More and more individuals sign agreements online' or 'we provide clients with the opportunity to see a real estate online.' To summarise, we may state that the COVID-19 pandemic has accelerated the digitalisation of businesses ran by real estate brokers, which means that traditional business models in the housing market begin to transform into such models in which advanced technologies are used to a greater extent (Tomal, 2020a).

Moreover, we should note that the greater use of modern technologies by small companies, such as real estate offices, has made it possible for them to avoid a complete economic shutdown. On the one hand, these technologies have become for small companies a survival strategy during lockdown (Akpan *et al.*, 2020), while on the other hand, an opportunity for development. The latter aspect is also indicated by Kuc-Czarnecka (2020), who shows that the current and potential future lockdowns can be a catalyst for the development of information and communication technologies, which will make it possible for firms to reduce the digital deprivation that affects around 14% of Poles.

The second descriptive question was to identify the changes in the clients' attitude, including but not limited to the landlords' strategies and tenants' preferences in the housing market in Krakow. Approximately 80% of the surveyed real estate brokers drew attention to the changes in two areas. Firstly, a substantial part of the respondents noticed a change in the landlords' strategies from short-term into long-term rental: 'landlords who rent out apartments on a daily basis, namely tourist apartments, are forced to accept no tenants within the coming 12-24 months or offer their apartments for rent in the housing

market for at least one-year-long rental.' Another broker noted: 'landlords offer temporary promotions – especially in the very city centre – in order to spare no effort to rent out apartments at any cost, thus shifting from the short-term rental to the regular, long-term one.' Still another broker emphasised the landlords' agreement to reduce rents: 'there is a noticeable consent to reduce the rent for current tenants compared to previous months.'

There also appeared responses emphasising the raising standards of offered apartments: 'landlords lower prices and attempt to ensure a better comfort for tenants, competing with other landlords.'

On the other hand, changes in tenants' preferences may be noticed, which is exemplified by the following response provided by one of the surveyed individuals: 'tenants expect lower rents, waiting for more attractive, that is, cheaper offers; new residential buildings are most preferred by the tenants; even when they are built a poorer location, lower rents encourage to rent larger apartments.' Another broker similarly noted that 'tenants often seek attractive rents; they want to take advantage of the situation in order to lower the cost of rent.' Another interviewee remarked that the tenants 'look for apartments closer to the city centre in return for rents comparable to the rents for apartments located farther away from the city centre.' Respondents also drew attention to the prevalence of short-lived agreements: 'people currently negotiate rents and enter into agreements for shorter periods due to the uncertain times.' In turn, another one of the surveyed staff members of the real estate office noted that 'the tenants expect larger apartments with a little garden or a balcony,' which of course may in the future impact long-term changes in housing market preferences (not only in the rental housing market), accounting for the necessity to revise findings of research conducted hitherto (even the latest one) not only in terms of the real estate market in Krakow (Głuszak & Małkowska, 2017; Głuszak, 2018; Tomal, 2020b) but also in other parts of Poland (Źróbek-Różańska & Szulc, 2018; Tanaś, Trojanek, & Trojanek, 2019; Jancz & Trojanek, 2020) and around the world (Sika & Vidová, 2017; Soon & Tan, 2019; Opit, Witten & Kearns, 2019).

CONCLUSIONS

The conducted research has allowed us to accomplish the outlined objective and answer both research questions. It is utterly plausible to state that the COVID-19 pandemic has considerable impacted the workflow of real estate brokers and their clients' attitudes. The real estate brokers started working online to a greater extent and, thus, intensified the use of digital technologies in their businesses. Furthermore, the COVID-19 pandemic forced real estate broker offices to undertake various precaution measures in the case of face-to-face contacts, which are commonly recognised within the framework of other kinds of economic operations. On the other hand, clients' attitudes have also changed. Taking particularly into account the rental housing market, many landlords changed their strategies, namely from the short-term rental model into the long-term one. In turn, in the current situation, tenants began demanding lower rents and higher-standard apartments. Moreover, so-called exclusive right-to-sell agreements started to gain popularity.

However, when presenting the above conclusions, we should be aware that this study has certain limitations that concurrently constitute the prerequisite for undertaking subsequent research in the future. As we already mentioned, in the questionnaire-based survey open-ended questions were exclusively used to achieve the research goal.

It allowed us to derive specific benefits typical for qualitative analyses, i.e. an opportunity to present a more accurate image of reality, particularly in the situation when it has not been sufficiently studied or diagnosed, which undoubtedly is the case with the emergence of COVID-19 pandemic. It appears that we should continue qualitative analyses by means of other research techniques, including but not limited to in-depth and focus group interviews. Notwithstanding the fact that the current studies are not representative in nature, which is the also case with other qualitative analyses suggested by us, they may nevertheless constitute good input data for the purpose of future quantitative analyses. The latter should broaden the extent of the study and include brokers that are not members of associations, in particular those representing large foreign broker chains. Furthermore, we should remember that the real estate market is characterised by significant localism, thus we must extend our analyses to include foreign real estate markets, not only the Polish one. Moreover, in the course of our analyses, we discovered that the COVID-19 pandemic impacts clients' preferences in the housing market. At present, we cannot definitely judge whether these changes are substantial and permanent, which nevertheless calls for new research to address this issue as well.

REFERENCES

- Akpan, I.J., Soopramanien, D., & Kwak, D.H. (2020). Cutting-edge technologies for small business and innovation in the era of COVID-19 global health pandemic. *Journal of Small Business & Entrepreneurship*, 1-11. https://doi.org/10.1080/08276331.2020.1799294
- Benavides, A.D., & Nukpezah, J.A. (2020). How Local Governments Are Caring for the Homeless During the COVID-19 Pandemic. *The American Review of Public Administration*, 50(6-7), 650-657. https://doi.org/10.1177%2F0275074020942062
- Bloom, J. (2020). Coronavirus may have huge impact on property markets. *BBC*. Retrieved from https://www.bbc.com/news/business-52977890, on August 11, 2020.
- D'alessandro, D., Gola, M., Appolloni, L., Dettori, M., Maria, G., Fara, A.R., Rebecchi, A., Settimo, G., & Capolongo, S. (2020). COVID-19 and Living Spaces challenge. Well-being and Public Health recommendations for a healthy, safe, and sustainable housing. *Acta Biomedica*, 91, 61-75. https://doi.org/10.23750/abm.v91i9-S.10115
- Del Giudice, V., De Paola, P., & Del Giudice, F.P. (2020). COVID-19 infects real estate markets: Short and mid-run effects on housing prices in Campania region (Italy). *Social Sciences*, 9(7), 114. https://doi.org/10.3390/socsci9070114
- Fezi, B.A. (2020). Health engaged architecture in the context of COVID-19. *Journal of Green Building*, 15(2), 185-212. https://doi.org/10.3992/1943-4618.15.2.185
- Glapiak, E. (2020). Pandemia nie obniżyła cen mieszkań. Metr kwadratowy nadal drożał. *Business Insider*. Retrieved from https://businessinsider.com.pl/finanse/ceny-mieszkan-w-polsce-rosly-nawet-w-czasie-pandemii-koronawirusa/pc4bvew on August 11, 2020.
- Głuszak, M. (2018). Externalities and house prices: a stated preferences approach. *Entrepreneurial Business and Economics Review*, 6(2), 181-196. https://doi.org/10.15678/EBER.2018.060410
- Głuszak, M., & Małkowska, A. (2017). Housing preferences of young people in Cracow's residential market. *World of Real Estate Journal*, 2(100), 39-44. https://doi.org/10.14659/worej.2017.100.06
- Holbrook, A.L., Krosnick, J.A., & Pfent, A. (2008). The causes and consequences of response rates in surveys by the news media and government contractor survey research firms. *Advances in Telephone Survey Methodology*, 1, 499-528. https://doi.org/10.1002/9780470173404.ch23

- Jancz, A., & Trojanek, R. (2020). Housing preferences of seniors and pre-senior citizens in Poland—a case study. *Sustainability*, 12(11), 4599. https://doi.org/10.3390/su12114599
- Johns Hopkins Coronavirus Resource Center. (2020). Retrieved from https://coronavirus.jhu.edu/, on August 18, 2020.
- Koszel, M. (2020). Pandemia COVID-19 a rynek nieruchomości w Polsce. Raport z badania. Retrieved from https://www.researchgate.net/publication/341355064_Pandemia_COVID-19_a_rynek_nieruchomosci_w_Polsce_Raport_z_badania, on August 18, 2020.
- Korzeb, Z., & Niedziółka, P. (2020). Resistance of commercial banks to the crisis caused by the COVID-19 pandemic: the case of Poland. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 15(2), 205-234. https://doi.org/10.24136/eq.2020.010
- Kuc-Czarnecka, M. (2020). COVID-19 and digital deprivation in Poland. Oeconomia Copernicana, 11(3), 415-431. https://doi.org/10.24136/oc.2020.017
- Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C.A.M., Prochotta, A., Steinbrink, K.M., & Berger, E.S. (2020). Startups in times of crisis–A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, 13, e00169. https://doi.org/10.1016/j.jbvi.2020.e00169
- Kufel, T. (2020). ARIMA-based forecasting of the dynamics of confirmed Covid-19 cases for selected European countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 15(2), 181-204. https://doi.org/10.24136/eq.2020.009
- Liguori, E., & Winkler, C. (2020). From Offline to Online: Challenges and Opportunities for Entrepreneurship Education Following the COVID-19 Pandemic. *Entrepreneurship Education and Pedagogy*, 3(4), 346-351. https://doi.org/10.1177/2515127420916738
- Maalsen, S., Rogers, D., & Ross, L.P. (2020). Rent and crisis: Old housing problems require a new state of exception in Australia. *Dialogues in Human Geography*, 10(2), 225-229. https://doi.org/10.1177/2043820620933849
- Mendes, L. (2020). How Can We Quarantine Without a Home? Responses of Activism and Urban Social Movements in Times of COVID-19 Pandemic Crisis in Lisbon. *Tijdschrift Voor Economische* en Sociale Geografie, 111(3), 318-332. https://doi.org/10.1111/tesg.12450
- Morgan, A.K. (2020). Making COVID-19 prevention etiquette of social distancing a reality for the homeless and slum dwellers in Ghana: lessons for consideration. *Local Environment*, 25(7), 536-539. https://doi.org/10.1080/13549839.2020.1789854
- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, 78, 185-193. https://doi.org/10.1016/j.ijsu.2020.04.018
- Opit, S., Witten, K., & Kearns, R. (2019). Housing pathways, aspirations and preferences of young adults within increasing urban density. *Housing Studies*, 35(1), 123-142. https://doi.org/10.1080/02673037.2019.1584662
- Pilař, L., Kvasničková Stanislavská, L., Gresham, G., Poláková, J., Rojík, S., & Petkov, R. (2018). Questionnaire vs. Social Media Analysis Case Study of Organic Food. AGRIS on-line Papers in Economics and Informatics, 10(3), 93-101. https://doi.org/10.7160/aol.2018.100308
- Ratten, V. (2020a). Coronavirus (covid-19) and entrepreneurship: changing life and work landscape. Journal of Small Business & Entrepreneurship, 32(5), 503-516. https://doi.org/10.1080/08276331.2020.1790167
- Ratten, V. (2020b). Coronavirus disease (COVID-19) and sport entrepreneurship. International Journal of Entrepreneurial Behavior & Research, 26(6), 1379-1388. https://doi.org/10.1108/IJEBR-06-2020-0387

- Sika, P., & Vidová, J. (2017). Interrelationship of migration and housing in Slovakia. *Journal of International Studies*, 10(3), 91-104. https://doi.org/10.14254/2071-8330.2017/10-3/7
- Soon, A., & Tan, C. (2019). An analysis on housing affordability in Malaysian housing markets and the home buyers' preference. *International Journal of Housing Markets and Analysis*, 13(3), 375-392. https://doi.org/10.1108/IJHMA-01-2019-0009
- Tomal, M. (2020a). Moving towards a Smarter Housing Market: The Example of Poland. *Sustainability*, 12(2), 683. https://doi.org/10.3390/su12020683
- Tomal, M. (2020b). Modelling Housing Rents Using Spatial Autoregressive Geographically Weighted Regression: A Case Study in Cracow, Poland. *ISPRS International Journal of Geo-Information*, 9(6), 346. https://doi.org/10.3390/ijgi9060346
- Tanaś, J., Trojanek, M., & Trojanek, R. (2019). Seniors' revealed preferences in the housing market in Poznań. *Economics and Sociology*, 12(1), 353.365. https://doi.org/10.14254/2071-789X.2019/12-1/22
- Zahra, S.A. (2020). International entrepreneurship in the post Covid world. *Journal of World Business*, 56(1), 101143. https://doi.org/10.1016/j.jwb.2020.101143
- Źróbek-Różańska, A., & Szulc, I. (2018). Over a million student tenants in Poland. Analysis of preferences. *Real Estate Management and Valuation*, 26(2), 104-113. https://doi.org/10.2478/remav-2018-0020

Authors

The contribution share of authors is equal and amounted to 50% each of them.

Bartłomiej Marona

Associate Professor at the Department of Real Estate and Investment Economics, Cracow University of Economics. His research interests include real estate economics and real estate management. Correspondence to: Bartłomiej Marona, PhD, Department of Real Estate and Investment Economics, Cracow University of Economics, Rakowicka 27, 31-510 Krakow, Poland, e-mail: maronab@uek.krakow.pl

ORCID (1) http://orcid.org/0000-0002-0490-5945

Mateusz Tomal

Assistant professor at the Department of Real Estate and Investment Economics, Cracow University of Economics. His research interests include housing market, real estate economics, land market, econometric modelling, and local government efficiency.

Correspondence to: Mateusz Tomal, PhD, Department of Real Estate and Investment Economics, Cracow University of Economics, Rakowicka 27, 31-510 Krakow, Poland, e-mail: tomalm@uek.krakow.pl

ORCID () http://orcid.org/0000-0002-8393-1614

Acknowledgements and Financial Disclosure

This project has been financed by the Ministry of Science and Higher Education within the "Regional Initiative of Excellence" Programme for 2019-2022. Project no.: 021/RID/2018/19.

The authors would like to thank the anonymous referees for their useful comments, which allowed for the value of this article to increase.

Copyright and License



This article is published under the terms of the Creative Commons Attribution - NoDerivs (CC BY-ND 4.0) License http://creativecommons.org/licenses/by-nd/4.0/

Published by Cracow University of Economics – Krakow, Poland



Ministry of Science epublic of Poland

The copyediting and proofreading of articles in English is financed in the framework and Higher Education of contract No. 913/P-DUN/2019 by the Ministry of Science and Higher Education of the Republic of Poland committed to activities aimed at science promotion.