

The 4th International Conference on Economics and Social Sciences
Resilience and economic intelligence through digitalization
and big data analytics
June 10-11, 2021
Bucharest University of Economic Studies, Romania

Empirical Analysis of the Impact of the COVID-19 Pandemic on the Real Estate Industry in Romania

Raluca Florentina CREȚU¹, Romeo Cătălin CREȚU^{2*}, Petrică ȘTEFAN³

DOI: 10.2478/9788366675704-005

Abstract

2020 was an atypical, difficult and unusual year. It changed the way we live, work and many of the values we thought were important. Both human health and activity in all industries were influenced in different ways by the pandemic produced by the SARS-CoV-2 virus. The Real Estate Industry was no exception, which was one of the least hit by the dreaded virus and restrictions. Despite the challenges of the COVID-19 epidemic, in Romania, sellers' claims returned to an upward trajectory in the latter part of 2020, which are currently 2.2% higher compared to the beginning of 2020. Demand remained high especially in the second half of the year. Positive annual differences can be observed in all six constantly monitored regional centres, at the top of the ranking being the prices in the city of Cluj-Napoca, while Bucharest is at the other end of the spectrum. The average amount requested for an apartment increased by 1.5% during December, from 1,351 to 1,371 euros per useful square meter. What is the impact of the COVID-12 pandemic on Romania's Real Estate Industry? The research questions of this work are: 1. How affected was this industry in the major cities of Romania in 2020 compared to 2019? How has the average price per square metre evolved during this period? The research will cover the period from January 2019 to December 2020 and will analyse the Real Estate Industry in several Romanian cities.

Keywords: real estate market, real estate properties, real estate index, price, demand.

JEL Classification: R31, R32, D12, E27, O18.

¹ Bucharest University of Economic Studies, Bucharest, Romania, raluca.cretu@cig.ase.ro.

² University of Agronomic Sciences and Veterinary Medicine, Bucharest, Romania, cretumeocatalin@yahoo.com.

* Corresponding author.

³ University of Agronomic Sciences and Veterinary Medicine, Bucharest, Romania, stefanmarian2004@yahoo.com.

1. Introduction

The real estate market is a market that is very sensitive to economic fluctuations. For emerging economies, the real estate market is one of the industries with the greatest dynamism in the economy being considered a main vector of development (Hoesli, 2016). In general, periods of economic turmoil generate great opportunities in the real estate market. The year 2020 was a year with great changes in society and economy, a year in which many sectors of activity were affected by the COVID-19 pandemic. However, the real estate market has proven to remain stable and as dynamic as in 2019 (Cuc, 2020).

At European level, specialists expect price corrections, in the sense of a decrease by 5-10% in sales, decreases in rents in the rental segment, as well as a decrease in the volume of transactions. Exceptions are countries such as France, Finland, the Netherlands, the Czech Republic and Turkey, where real estate market specialists predict a 2-5% increase in house prices. In the top of European countries with the most expensive homes in 2019 was France, with 4,016 euro / sqm, followed by Great Britain, with an average price of 3,753 euro / sqm. In the Netherlands, which was in the middle of the ranking, homes were sold in 2019 on average, with 3,405 euros / sqm. According to the data provided by imobiliare.ro website, in Romania, the price per square meter was 1,341 euros. At the level of European capitals, last year homes in Paris recorded the highest price per square meter for sale – 12,910 euros, representing 321% of the average price nationwide. In comparison, in Bucharest, the average price is over 9 times lower, respectively 1,380 euro / sqm.

In Romania, 2020 was an interesting year in the real estate market, both for urban and rural areas, given that the pandemic was the biggest challenge, and many activities quickly moved from the real environment to the online environment. The pandemic has caused a state of concern related to rising unemployment, reduced economic activities, possible declines in incomes, in the event of an economic crisis. The transition to online education has had an impact on the real estate market in major universities, especially in the area of rents. As a result of the pandemic, there is a phenomenon of rising prices for real estate in new neighbourhoods, residential areas, houses and land, homes outside the city. The Romanian real estate market still has a great potential for development (Anica-Popa, 2013) in the context in which it is still the largest property market in Europe. This desire of Romanians to have a property determines on the real estate market an acceleration of the demand. There are more and more Romanians who invest in country houses (holiday homes), houses and the low prices of real estate, as well as high rental yields, compared to the European ones, offer us competitive advantages in investment decisions. Through this paper we aim to contribute to the knowledge of the evolution of the real estate market in Romania in the period 2008-2018 by conducting an empirical analysis of the real estate transactions sector, although the data provided by the National Institute of Statistics (INS) are modest for this sector. We will analyse the number of companies in the sector, the number of employees, turnover and efficiency indicator, and labour productivity in the real estate transactions sector. We will continue the analysis with the period January 2019 - December 2020 to identify how

affected this sector was in the big cities in Romania, respectively Bucharest, Timisoara, Iasi, Cluj-Napoca, Brasov, Constanta, and how the average price per square meter evolved in this period. In order to achieve the objective, we used the database provided by INS, for the period 2008-2018, for the real estate transactions sector, the reports on the evolution of the real estate market in Romania in the period 2018-2020 provided by the imobiliare.ro website. This is the first site in Romania that "offers the most comprehensive, detailed and accurate database with over 6 million property records and 4 million records of site visitors covering a period of 15 years." "Analyze imobiliare.ro" website is the leader in real estate data in Romania. The database has multiple sources that combine private and public data records.

The content of the paper is structured as follows: the first part of the paper presents the literature and the opinions of real estate market specialists regarding the period 2019-2020 and the COVID-19 effects on the global, European and national real estate market, research methodology and research hypotheses, results and discussions on the topics analysed on the real estate market, especially in Romania, so that at the end of the paper we can formulate some conclusions about the analysed topic, but especially the implications and research directions that the authors of this paper propose in the future.

2. Literature Review

The COVID-19 pandemic has stimulated intense efforts among researchers to estimate the likely evolution of the pandemic and its economic and social effects. Several studies have looked for information on past global pandemics, including the Spanish flu pandemic of 1918-1919, which is believed to have infected about 500 million people, or about a third of the world's population, and killed worldwide between 50 and 100 million people (Wheelock, 2020). Today, 1 year and a half after the COVID-19 pandemic, 157 million cases, 3.2 million deaths and 134.3 million recovered cases are registered.

Globally, real estate market researchers have begun building regional COVID-19 risk factors to assess how pandemic stock risk exposure affects their performance. There are substantial differences between stocks in Asia and the US as a result of the pandemic. The most affected sectors in the US are retail and tourism, especially hotels, while in Asia it is the office industry (Milcheva, 2020). The Fama-MacBeth regression shows clear evidence of a low risk effect during the COVID period. Recently, research identifying the effect of proximity (as a distance) to COVID-19 cases on the profitability of real estate firms emerged (Xie, and Milcheva, 2020 and Nuno, 2020). A micro-data set was used to combine extensive data on the geographical footprint of COVID-19 infected patients, i.e. the locations where they lived or visited and the location of Hong Kong real estate holdings. Significantly negative were the effects of the approximation of COVID-19 cases on stock yields. The MSCI World Real Estate Index is a fluctuating market capitalization index consisting of large and medium-sized equity in 23 developed countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong,

Ireland), Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the USA). All securities in the index are classified in the real estate sector in accordance with the Global Industry Classification Standard (GICS®). The MSCI World Real Estate Index was launched in 1999 on September 15, 1999. The index is designed to monitor the performance of real estate investment trusts (REITs) and companies that invest directly or indirectly in real estate through development, management or ownership, including real estate agents.

At European level, service-oriented economies will be negatively affected in the next period and will have more jobs at risk. Thus, countries such as Greece, Portugal and Spain, which are more dependent on tourism, with a contribution of more than 15% to the GDP, will be more affected by this crisis than the rest of the countries. The current crisis is having side effects in supply chains. Thus, countries that are dependent on foreign trade will be much more adversely affected than other countries. The results suggest that, on average, each additional month of crisis costs 2.5-3% of global GDP.

The real estate market in Romania had been in a mature phase for a long time and would have remained in this state if, worldwide, a crisis caused by the COVID-19 pandemic had not started. The pandemic caused by the Coronavirus has spread beyond the health effects, and it is expected to have an impact with very severe implications in some economies. No one has the power to anticipate the future, and as every ordinary person probably feels, the watchword for the future is uncertainty. With this uncertainty, the housing needs of Romanians in the urban area will not change greatly, but small changes will occur such as for houses in the metropolitan area, in the many localities around major cities in Romania. So the term relocation, sale, acquisition appears more and more frequently (Cuc, 2020). Another change on the real estate market came from the new way of working from home, discovered by Romanians during the isolation period because many companies quickly reoriented and found new ways of working for employees, which did not visit the office for months. Working from home, however, implies the existence of a more complex type of home in terms of functionality, an "upgrade" of the bedroom apartment, with larger spaces, a work room, a kitchen where you can cook and eat in a civilized way, more meals daily with a generous terrace or balcony.

Romania is a somewhat atypical country, with a huge percentage of over 90% homeowners - compared to 60% in Northwestern Europe - and this gives significant comfort to homeowners/tenants who will not immediately have pressure to sell and will allow you to wait a longer time for better days to sell (Buyukhanli, 2019). So, a market downturn due to lack of demand will take time to gather enough price pressure and generate declines. Some real estate specialists in the real estate segment expected a correction of 10% on average, with maximum decreases of 20% in the next 12 months in some particular or niche situations. A real estate index has been calculated in Romania at national level since 2008.

3. Research Methodology and Hypotheses

In order to achieve the objectives of this research, we analysed the "real estate transactions" sector in the period 2008-2018 in terms of indicators: number of companies, average number of employees, average number of employees, turnover. The average labour productivity indicator was calculated as the ratio between turnover and number of employees. The data analysed over a period of 10 years are provided by the website of the National Institute of Statistics. For the period 2018-2020, we analysed the quarterly reports published by imobiliare.ro, the largest real estate portal in Romania. Both real estate agencies and individuals can publish their offers here. Imobiliare.ro was launched in 2000 and offers specialists information about the demand and supply of housing in Romania. At the end of the research we will analyse the real estate index from 2008-2020. This represents the average of the requested price, expressed in euros per useful square meter for the sold apartments located in apartment blocks, with residential destination, based on the announcements published on the www.imobiliare.ro website by real estate agencies and owners. This index is calculated at national level, but also for the largest cities in Romania: Bucharest, Brasov, Cluj-Napoca, Constanta, Iasi and Timisoara. Despite the very pronounced local character specific to the residential segment, through the developed monitoring system, the real estate index manages to faithfully reproduce the trends of this segment and to impose itself as a reference tool. This instrument does not take into account the variable trading margin from one transaction to another that determines the final price of the transaction.

The research hypotheses we used in our study are:

Hypothesis 1: Is the real estate transaction sector in Romania a stable sector?

Hypothesis 2: Was the demand for the acquisition of residential properties in 6 large cities (Bucharest, Timisoara, Iasi, Cluj-Napoca, Brasov, Constanța) in Romania relatively constant in the period 2018-2020?

Hypothesis 3: Is the supply on the real estate market stable in the period 2018-2020 both on the existing and on the new market sector?

Hypothesis 4: Is the annual rate of increase in prices for residential properties at the national level relatively stable in new markets?

Hypothesis 5: Is the evolution of the real estate index a reference tool that reproduces the fidelity of the trends on the residential segment? Based on these hypotheses, the authors of this article set out to make an empirical analysis on the impact of the COVID-19 pandemic on the real estate industry in Romania.

4. Results and Discussions

The analysis of the "Real estate transactions" sector was made starting from indicators such as: human resources, number of companies, turnover, productivity. In this sector of activity there was a stability of the labour force in the period 2008-2018, according to the data provided by the Institute of Statistics.

Hypothesis 1: During the 10 years, the number of employees ranged between 40,000 and 50,000, which means that the sector is relatively new and stable.

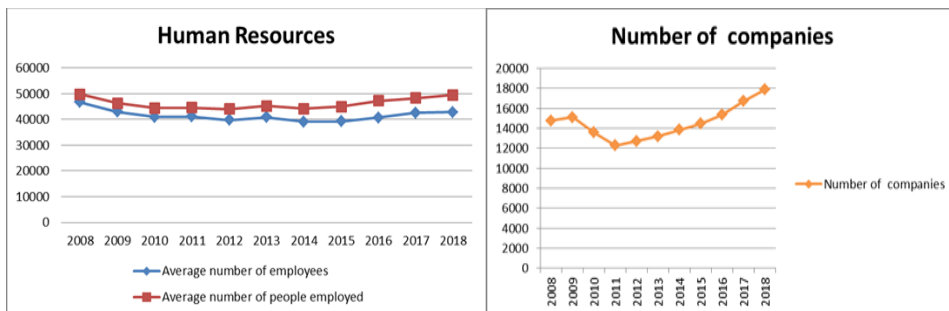


Figure 1. Evolution of the average number of employees and the number of companies in the real estate transactions sector

Source: www.inse.ro.

The number of companies in the real estate transactions sector increased by 3,100, by 21%, respectively in the period 2008-2018. After an unfavourable period affected by the crisis of 2008-2009, when the number of companies in this sector decreased from 15,107 in 2009 to 12,737 in 2012, the number of companies in the real estate sector increased steadily, reaching 17,867 in 2018. The turnover of the analysed sector stagnated at around 9 billion lei in the period 2008-2012, after which the indicator had a positive trend, reaching 16.5 billion lei in 2018, which is an increase of 72.3%.

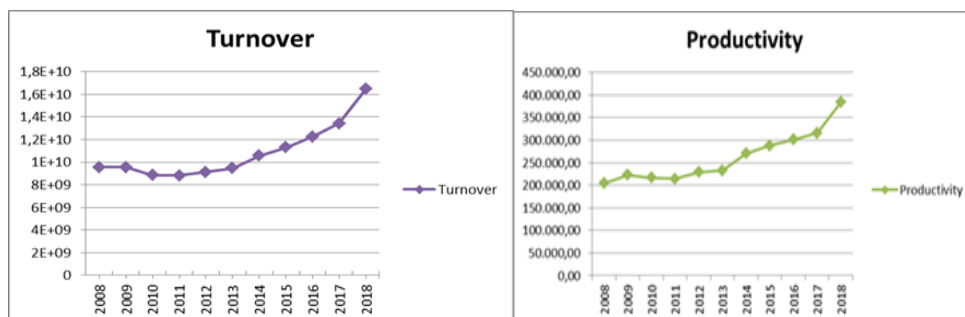


Figure 2. Evolution of turnover and productivity in the real estate transactions sector

Source: www.inse.ro.

Turnover is the indicator that expresses sales volume. The evolution of this indicator shows that the sector is a new one, with many development opportunities in Romania, even in the COVID-19 pandemic that affected the whole world in 2020. Based on the 2 indicators presented above, we calculated labour productivity in the sector "real estate transactions". Figure 2 shows the upward evolution of productivity in the period 2008-2018, which shows the efficiency of work in the analysed sector.

The 2nd hypothesis of our research is related to the analysis of the demand for the acquisition of residential properties in 6 large cities in Romania, in the period 2018-2020. In this sense, we analysed the real estate properties sold at national level, the

balance of loans for housing granted to the population at national level (billion lei), the average net nominal earnings (lei) and the unemployment rate.

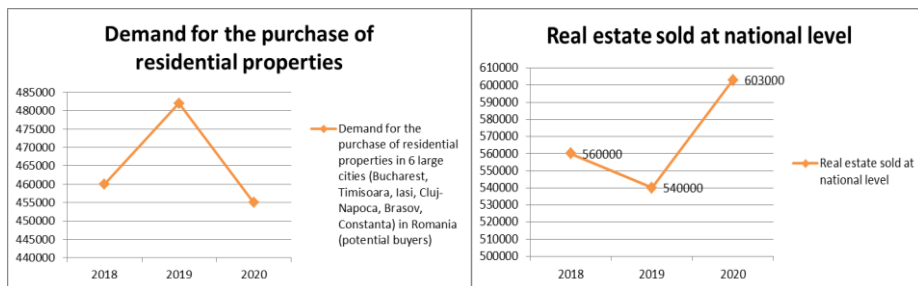


Figure 3. Evolution of demand for residential property in 6 cities in Romania and the number of real estate properties sold nationally in the period 2018-2020

Source: Real estate market report 2018-2020, www.imobiliare.ro.

Demand for the purchase of residential properties in 6 large cities in Romania (potential buyers) increased by 4.7% in 2019 compared to 2018, and decreased by 5.60% in 2020, a year strongly marked by the COVID-19 pandemic, compared to 2019. Real estate sold nationally absolutely decreased by 20,000 (of which 3,000 individual units) in 2019 compared to 2018, respectively by 3.57%, but increased by 63,000 (of which 9,000 were individual units).

In Bucharest, house prices increased during the analysed period. Thus, in December 2020, house prices reached an average of 1,425 euros per useful square meter, up by 1.8% compared to the end of November (when they cost 1,400 euros per square meter). The new apartments, on the other hand, reached, at the end of 2020, a price of 1,481 euros per usable square meter, in the conditions of an annual increase of 1.3% (from 1,462 euros per usable square meter).

In Brasov, an increase of almost half a percentage point. The old housing units reached a listing value of 1,202 euros per useful square meter, in the conditions of an increase of 5.1% in 12 months (from 1,144 euros per square meter). New homes, on the other hand, recorded an increase of 5.7% in the analysed period, from 1,229 to 1,299 euros per square meter.

Cluj-Napoca remained at the same prices. In 2020 too, the capital of Transylvania recorded, among the major regional centres, the most significant margin for increase in apartment prices. The old apartments in the city reached a value of 1,795 euros per square meter, which is equivalent to an increase of 3.2% in 12 months (from 1,739 euros per square meter). On the other hand, the newly built homes registered, in the same period, a significantly higher increase, by 11.5%, from 1,691 to 1,886 euros per square meter.

In Constanta, prices have dropped. The old apartments in Constanta stood at a price level of 1,241 euros per useful square meter at the end of the year, increasing by 2.6% compared to the beginning (when they reached 1,209 euros per square meter). The new homes in the city experienced a similar increase in the analysed period, namely by 2.5%, from 1,212 to 1,242 euros per useful square meter.

Iasi, the biggest increase. In the city located in the northeastern part of the country, the apartments in the old blocks of flats appreciated by 4.9% during 2020, from 1,049 to 1,100 euros per useful square meter. At the same time, housing in new residential complexes recorded an increase of 6.8%, from 1,029 to 1,099 euros per square meter.

Timisoara, an insignificant growth. In the city located on the Bega river, the expectations of apartment sellers increased by 0.4% in December compared to November (from 1,287 to 1,292 euros per useful square meter), while in 12 months, the increase was by 1.5% (from 1,273 euros per useful square meter). With an average price of 1,297 euros per square meter, the old houses in the city are currently 2% more expensive than a year ago (when they cost 1,272 euros per square meter). Newly built apartments, on the other hand, recorded a slight decrease in 12 months, of 0.4% to be exact, from 1,276 to 1,271 euros per useful square meter. In the period 2018-2020, the balance of loans for housing granted to the population at national level increased from 73,5 billion lei in 2018 to 81,20 billion lei in 2019, thus an increase by 10.5% and in 2020 they reached 89,20 billion lei, thus an increase by 9.85%.

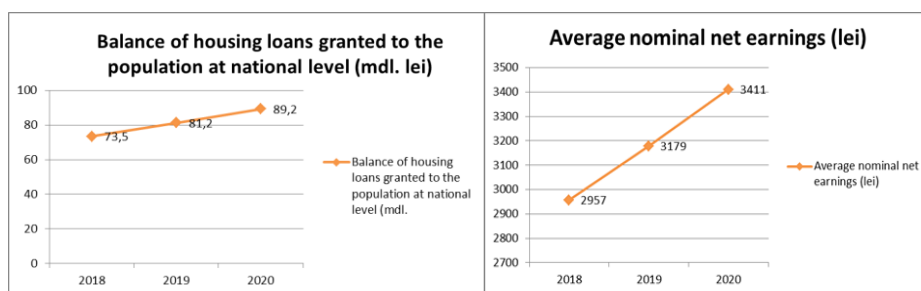


Figure 4. The evolution of the balance of loans for housing granted to the population (billion lei) and the average net nominal earnings in the period 2018-2020

Source: Real estate market report 2018-2020, www.imobiliare.ro.

The average net nominal earnings (lei) increased from 2,957 lei in 2018, to 3,179 lei in 2019, to reach 3,411 lei in 2020. Therefore, we are witnessing an increase in the net nominal salary by 15.35% in 2020, compared to 2018, which correlates positively with the increase in the appetite for loans of Romanians in this period.

The 3rd hypothesis refers to the supply on the real estate market. The supply in 2019 compared to 2018 registered an increase of 3,000 old real estate properties, while, in 2020, compared to 2019, we are witnessing a decrease of this supply category, by 6.82%. The effects of the COVID-19 pandemic on the real estate supply are beginning to be felt. In addition, the rental supply registered an increase by 32.14% on the existing (old) market, also as an effect of the pandemic, when the population quickly adapted to work from home, home schooling etc.

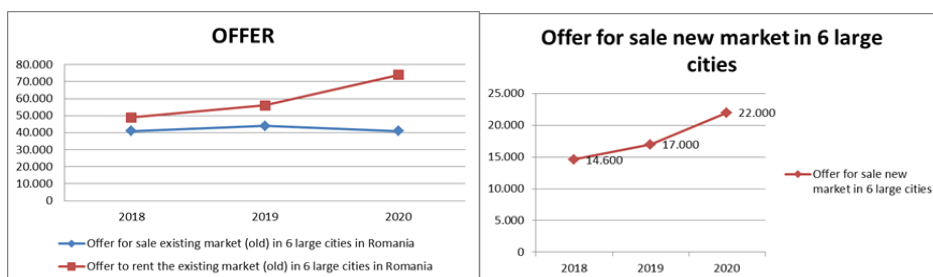


Figure 5. The evolution of the real estate offer in the period 2018-2020

Source: Real estate market report 2018-2020, www.imobiliare.ro.

The supply for sale on the new market increased by 29.41% in 2020 compared to 2019, also as a result of the pandemic, the newly built homes at national level registering an increase of 3,000 properties, respectively by 4.48%. Also as a result of the pandemic and the restrictions imposed by the authorities, at the level of construction permits there was a decrease of 4.76% in 2020 compared to 2019.

Hypothesis 4: Is the annual rate of increase in prices for residential properties at the national level relatively stable in new markets?

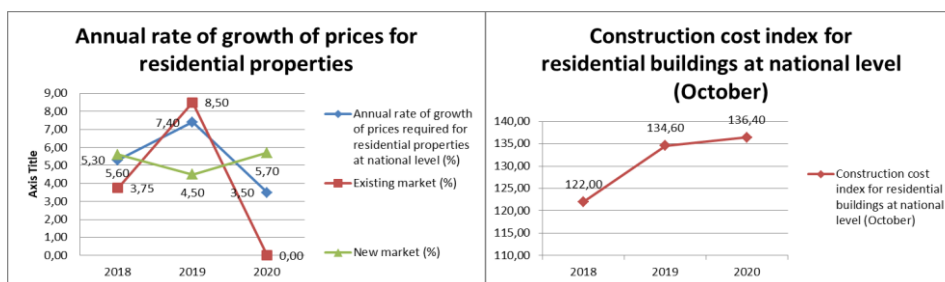


Figure 6. The evolution of prices and costs in the period 2018-2020

Source: Real estate market report 2018-2020, www.imobiliare.ro.

The analysis of market data provided by real estate reports for 2018-2019 shows that the annual rate of increase in prices for residential property nationwide decreased by 3.90% in 2020 compared to 2019 as a result of the pandemic of COVID-19, with a greater focus on the existing market (-8.5%), while the new market experienced a slight increase of 1.2%. The cost index of constructions for residential buildings at national level increased constantly in the analysed period, from 122% in 2018, to 134%, in 2019 and 136.40% in 2020, as it results from Figure 6.

Hypothesis 5: Is the evolution of the real estate index a reference tool that reproduces the fidelity of the trends on the residential segment? In order to provide a more accurate estimate, the real estate index is based on a calculation algorithm that allows the elimination of unrepresentative offers from the market by: identifying and eliminating duplicate offers and those with wrong prices or areas, respectively establishing the weights of new apartments/old apartments, of those with one, two,

three, four or more rooms, respectively. Figure 7 shows the evolution of the real estate index in 2008, strongly affected by the crisis of 2007 with negative effects felt for 2-3 years, when prices fell significantly. A period of stability follows during 2010-2015 in all major cities in Romania, after which the leader (Cluj) stands out, which at the beginning of 2021 dominates by far the Romanian real estate market, followed by Bucharest, Timisoara, Constanta and Brasov.

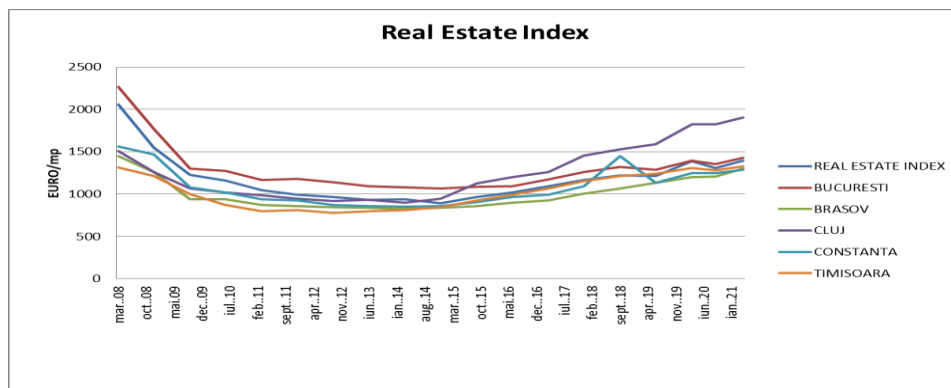


Figure 7. The evolution of the real estate index in the period 2008-2021

Source: <https://www.imobiliare.ro/indicele-imobiliare-ro>.

These are clear indications that the Romanian population has become aware of the long-term danger of this epidemic, in conjunction with homework and home schooling.

5. Conclusions

Considering the need to connect the results of our research with the analyses of specialists performed in the last 20 years at global, European and national level, we appreciate that our study demonstrates that the real estate market in Romania is in a mature phase and will remain in this state if, worldwide, there is no crisis caused by the COVID-19 pandemic that extends over a period of more than 2 years.

According to the first hypothesis, it can be appreciated that the “real estate transactions” sector is a new sector, growing with many development opportunities in Romania, even in the period 2018-2020, as we argued in the results and discussions section of this paper.

Based on the arguments presented above, it can be concluded that, hypothesis 2, according to which, the demand for the acquisition of residential properties in 6 large cities (Bucharest, Timisoara, Iasi, Cluj-Napoca, Brasov, Constanta) in Romania was relatively constant in period 2018-2020, is confirmed.

It can be concluded that the supply on the real estate market is a stable one in the period 2018-2020 both on the existing and on the new market sector, according to hypothesis 3.

According to hypothesis 4, the annual growth rate of prices for residential properties nationwide is relatively stable in new markets in 2018-2020.

Hypothesis 5, according to which the evolution of the real estate index is an important reference tool on the real estate market in Romania, positively correlated with the fidelity of the trends on the residential segment in the capital, but also in the big cities of the country.

Based on these hypotheses, the authors of this article conducted an empirical analysis on the impact of the COVID-19 pandemic on the real estate industry in Romania, which has been little affected to date. Most regional centres in the country have experienced, in the last year, decreases in the average price charged for the apartment segment. Cluj-Napoca and Iasi have the most significant increases in demand in the last 5 years. These are clear indications that the Romanian population has become aware of the long-term danger of this epidemic, and they have quickly combined professional life with family life and online education.

In the opinion of the authors, the limits of this research come from the area of real estate index calculation. This index has a pronounced residential character in Romania. The office, commercial and industrial segments are less developed in the composition of the real estate index. In addition, the index is calculated at national level, but also for the largest cities in Romania (Bucharest, Braşov, Cluj-Napoca, Constanţa, Iaşi and Timişoara). Medium and small cities do not have a representative share in the composition of this index.

The migration of the population from the crowded and noisy urban areas to the periphery, smaller and quiet cities or even to the rural area is a new topic to be researched in a future paper.

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