

## **Analysis of the structure of housing in Poland in the years 2009-2018**

**Agnieszka Czajkowska<sup>1</sup>, Wioletta Raczkiewicz<sup>2</sup>**

<sup>1</sup> *Department of Strength of Materials and Concrete Structures; Faculty of Civil Engineering and Architecture; Kielce University of Technology;  
Tysiąclecia Państwa Polskiego Av. 7, 25-314 Kielce, Poland  
a\_czajkowska@o2.pl  0000-0002-7430-4758*

<sup>2</sup> *Department of Strength of Materials and Concrete Structures; Faculty of Civil Engineering and Architecture; Kielce University of Technology;  
Tysiąclecia Państwa Polskiego Av. 7, 25-314 Kielce, Poland  
 0000-0001-5929-3571*

**Abstract:** The article presents an analysis of the housing situation in Poland against the background of European Union countries that took place in the last decade, i.e. in the years 2009 – 2018. The average number of dwellings per 1,000 inhabitants was analysed, the relationship between the number of dwellings and their area was determined, and the increase in the number of dwellings completed over the period was determined divided into flats: individual, cooperative, company and communal, as well as flats intended for sale or for rent

**Keywords:** housing in Poland; dwellings per 1,000 inhabitants; real estate

### **1. Introduction**

On the one hand, the apartment is a designed and structurally separated premises, on the other hand, it is a space necessary to ensure security, privacy and appropriate conditions for the learning and life of its inhabitants. Changes in demographics and culture significantly affect the preferences in choosing an apartment. However, the lower number of births and ageing population recently observed in many countries do not reduce the demand for new housing [1]. On the contrary, in tandem with the increasingly common phenomenon of housing alone, not only an increase in the demand for the number of apartments is observed, but also a larger residential area [1]-[2]. Lifestyle changes, including work at home, and increased proportions living alone, in younger ages in particular, change the preferences for the space being designed [3]. In Poland, despite various forms of government support, including tax breaks, facilities for lending or de-agricultural land, the increase in the number of apartments built annually is very slow [4].

Poland has been facing the problem of satisfying the housing needs of citizens for years, although character and scale of this problem has evolved over time [4]. In the 1950s, the housing deficit was enormous – there were on average 2.5 apartments per 1000 inhabitants. In the 1960s, the average flat area per inhabitant did not exceed 11m<sup>2</sup> and the flats were characterized by a uniform standard, architectural minimalism and economy in the use of space. In the mid-90s, there was although a predominance of supply over the demand for flats, but it resulted not so much from the excess of flats as from the low income of potential buyers who earned too little to afford a flat buying. Average earnings were the equivalent of approximately 0.6-0.7 square meters of usable floor space of a new apartment. In 2007, according to Urban Development data in Poland, there was a deficit of 1,400,000 flats [5].

At present, one can therefore wonder if the housing conditions of Poles have improved in recent years. What is the housing situation in Poland compared to other European Union countries? How is the share of individual forms of housing changing? These are the questions that we will try to answer in this article.

## 2. Structure of housing construction

### 2.1. Housing construction in Poland and standards in the European Union

The European Union standard assumes that an apartment or house should have one common room (it can be a living room or dining room), and moreover [6]:

- one room (bedroom) for a couple forming a household,
- one room (bedroom) for every single adult,
- one room (bedroom) for two same-sex children between 12 and 17 years old,
- one room (bedroom) for a person between 12 and 17 years old, if not included in the above,
- one room for two children under 12 years old.

Eurostat data for 2016 (Fig. 1) shows that Poland is in the fifth position in terms of overcrowding (40.7%) just behind Croatia (41.1%) and Bulgaria (42.5%).

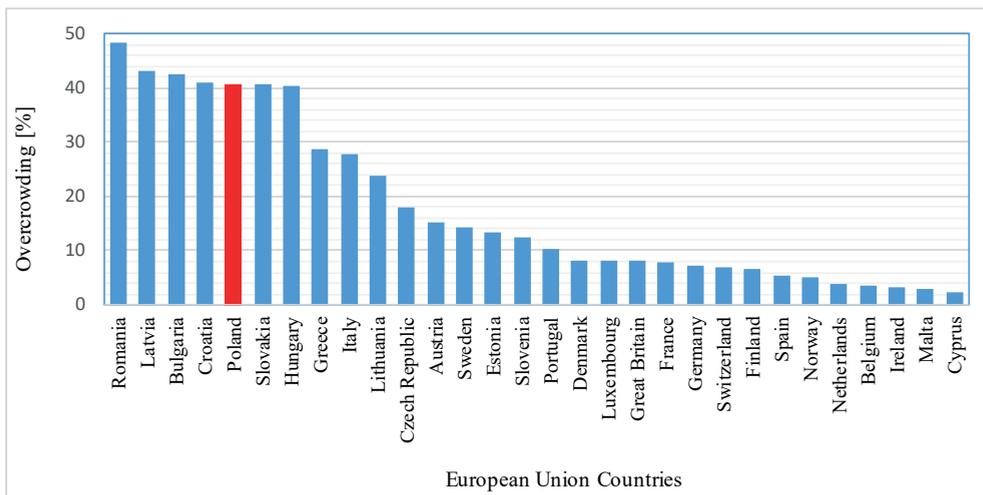


Fig. 1. Level of the overcrowding in the European Union countries in 2016 Source: [2]

Romania is a disgraceful leader in this field (48.4%). The lowest overcrowding rates are recorded in Cyprus (2.4%), Malta (2.9%), Ireland (3.2%) and Belgium (3.7%). An analysis of Eurostat data for 2016 shows that the average overcrowding in the European Union for 28 countries is 16.6%. This means that in Poland overcrowding is nearly 2.5 times higher than the European Union average. Comparison of the above data with the data from 2006 [7] shows that the level of overcrowding in Poland has decreased by 13.4% over the past 10 years.

The data of the report [8], which analyses the housing market in European countries, shows that in 2018, the countries with the largest number of flats were Germany (over 40,000,000 flats), France (about 350,000 flats) and the United Kingdom (about 2,800,000 flats), which is shown in Figure 2. In Poland, the state for 2018 was 14,600,000 apartments. The figure shows the number of available apartments in relation to the number of inhabitants. The degree to which available flats meet the needs of the population is also indicated (gray line). The analysis of the drawing shows that Portugal best meets housing needs (58%).

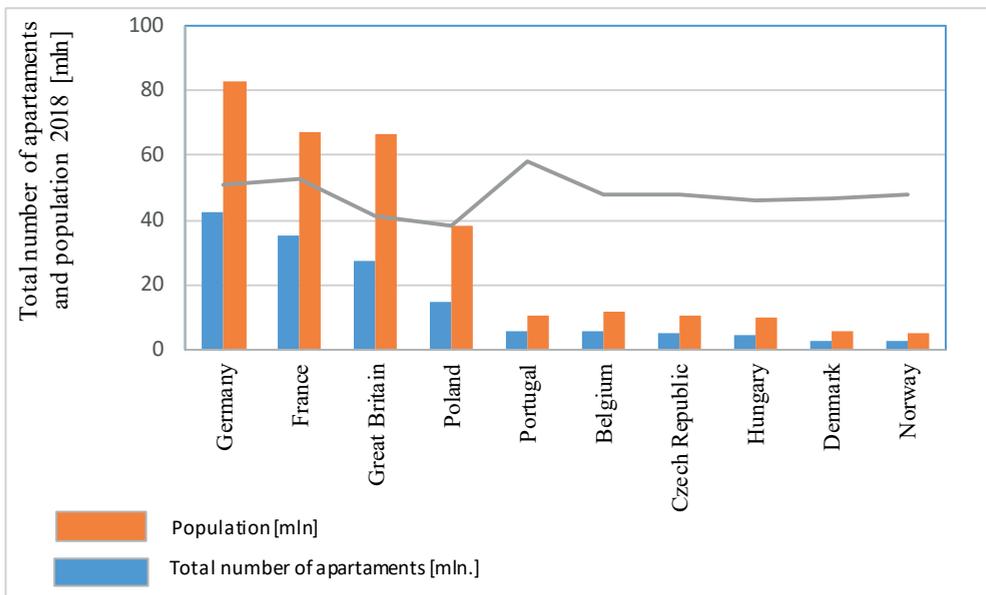


Fig. 2. Number of apartments in Number of apartments in relation to the number of inhabitants selected European Union countries in 2018 Source: [8]

A popular measure of the level of satisfaction of housing needs is the number of newly completed flats per 1,000 inhabitants [8].

Newly built apartments are an important element affecting the living conditions of the population, determining the social status of citizens and their standard of living. Figure 3 shows the number of newly completed flats per one thousand inhabitants [8]-[10] in selected European Union countries, including Poland.

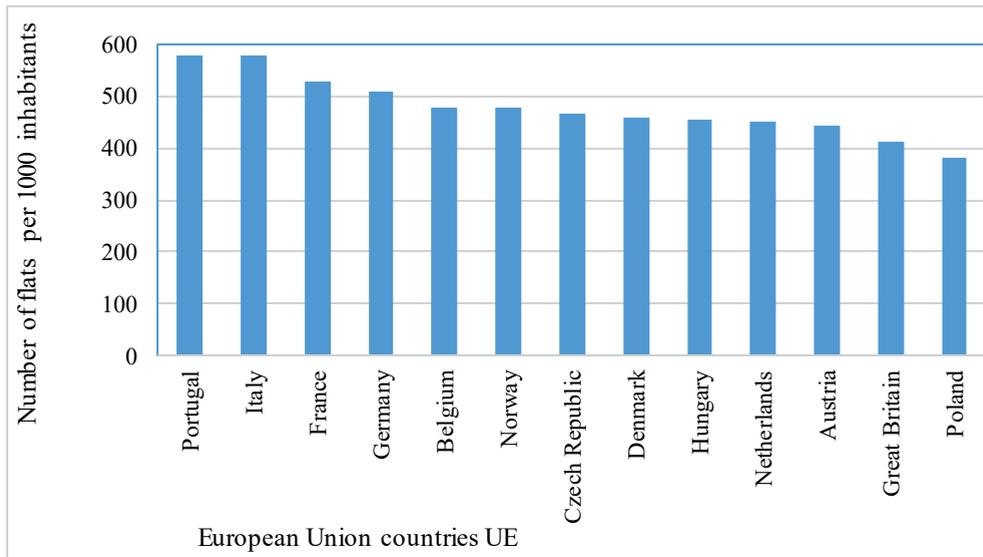


Fig. 3. Average number of apartments per 1000 inhabitants in selected European Union countries in 2018 *Source:* [8]-[10]

The analysis of the data shows that Poland cannot compete with such European Union countries as Portugal, Italy or France, where this indicator is the highest. On the other hand, we are pleased that in Poland the number of flats completed per 1000 inhabitants is increasing every year, as shown in Figure 4.

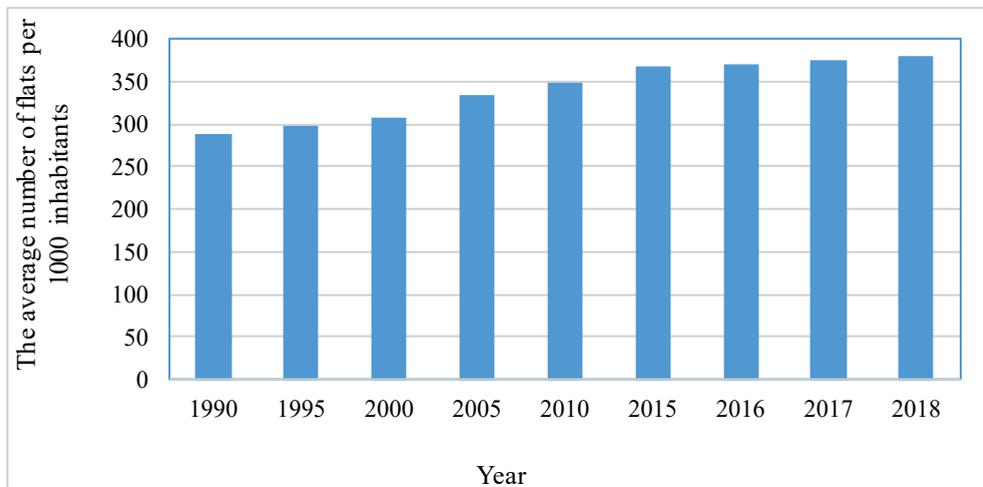


Fig. 4. Average number of apartments per 1000 inhabitants in Poland *Source:* [8]-[11]

The presented data show a steady increase in the number of flats in Poland in subsequent years (Fig. 4). In 2017, the average number of flats per 1000 inhabitants increased by 30.24%

compared to 1990, and by 22.68% compared to 2000. A slight increase in the number of apartments was recorded during the last year, i.e. 2018 compared to 2017 – only by 1.25%, which is worrying. Let's hope, however, that the upward trend will continue in the coming years, and maybe even increase significantly.

## 2.2. Housing construction in Poland in recent years

To get a more detailed picture of the housing situation in Poland, the number of dwellings completed in 2009-2018 was analysed and compared with the base year 2003 [9]. Additionally, the relationship between the number of flats and their area was analysed. The total number of dwellings completed (in thousands) and area (in millions of m<sup>2</sup>) is presented in Figure 5.

According to the data presented in Figure 5, in the 2018 year 185,170 apartments with a total usable area of 1,677,000 m<sup>2</sup> were commissioned. Compared to the previous year, the number of dwellings increased by 6828 (3.8%), and the area – by 168,400 m<sup>2</sup> (1,0%) [7]. In 2018, the largest number of completed dwellings out of all eleven years can be observed. Interestingly, in 2018, compared to 2003, an increase in the number of completed apartments was observed (13.86%), but their area decreased (by 11.27%).

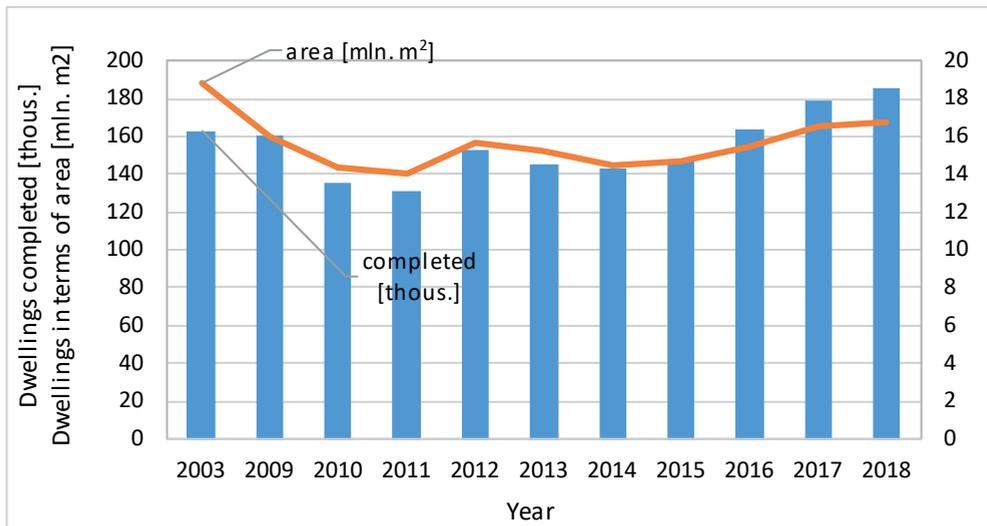


Fig. 5. Total dwellings completed (in thousand) and in terms of area (in millions of m<sup>2</sup>) Source: [9]

Additionally, on the basis of data from [8]-[10], it is possible to analyse the share of individual types of flats in the total number of flats completed in Poland in the last ten years (Fig. 6). In this case, 2003 was also adopted as the base year, which allows us to show the nature and rate of change. The number of dwellings completed was analysed, taking into account the type of ownership: individual apartments, flats for sale or rent, cooperative and other flats.

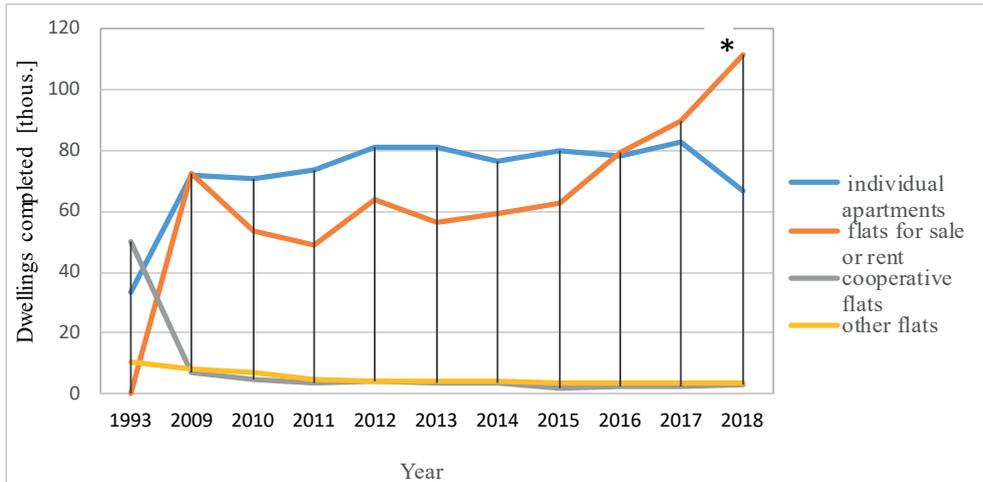


Fig. 6. Dwellings completed (in thousands) divided into: individual apartments, flats for sale or rent, cooperative and other flats (\*note: from January 2018, data on the effects of “individual housing” implemented for sale or rent were included in the form “housing for sale or rent”; for 2016 and 2017 the data have been calculated *Source*: [8])

Based on the analysis, a significant increase in the number of dwellings completed for sale or rent was observed. In 2009, compared to 1993, there was a significant increase in apartments built by individual investors. This level is still maintained. On the other hand, the share of flats sold as cooperative flats decreases from year to year. The number of cooperative apartments completed in 2018 compared to 2009 decreased by 58.6%. Also, the number of other flats: municipal, rent and company-owned is decreasing year by year. The article also presents the analysis of data on dwellings completed in new, non-new, collective housing and non-residential buildings (Fig. 7).

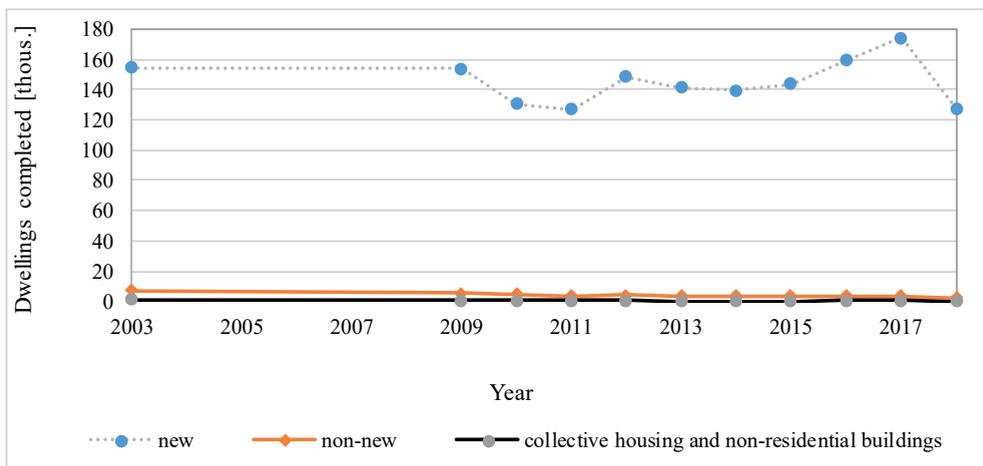


Fig. 7. Dwellings completed for use in new, non-new, collective housing and non-residential buildings *Source*: [8]

In 2017, the largest number of dwellings completed in new buildings was recorded – 174104. In 2018, it fell by 74.34% the number of apartments completed in the so-called collective housing and non-residential buildings. The number of flats completed in non-new buildings also decreased by 68% compared to 2003.

### 3. Summary

Based on the analyzes, it can be concluded that the housing conditions of the Polish society are systematically improving. Unfortunately, the pace and extent of this improvement are not satisfactory. According to data from the end of 2018, housing resources for the entire European Union amounted to 249.7 mln dwellings, of which 14.6 million is in Poland.

The indicator of the number of dwellings per 1000 inhabitants, which is a statistical measure of the availability of flats, increased between 1990 and 2018 from 349.6 to 380.7. Compared to 2017, this indicator increased by 1.25%. The goal of the government's housing policy is that by 2030 Poland will achieve an index of 435 apartments per 1000 inhabitants.

From year to year, the number of completed apartments is growing faster than their area.

Of all dwellings completed, approximately 6 052.8 thousand dwellings were located in buildings that were managed. Almost half, i.e. 49.0%, were flats of natural persons in buildings covered by housing associations, 33.5% – flats owned by housing cooperatives, 13.9% – communal flats, 1.7% – social housing associations, 1.1% – company, 0.5% – the Treasury and 0.3% – other entities [5]. The increase in the number of individual apartments and flats for sale or rent is clearly visible. The share of dwellings completed in the cooperative form of construction is decreasing from year to year.

### References

- [1] Białko M., "Potrzeby mieszkaniowe współczesnych społeczeństw", *Przestrzeń i FORMa*, no. 19, (2013), p. 66-68.
- [2] Lesthaeghe R, Surkyn J., "New forms of household formation in Central and Eastern Europe: Are they related to newly emerging value orientations?", *Interuniversity papers in demography*, IPD-WP, Bruksela-Belgia, no. 1, (2002), pp 1–16.
- [3] Keilman N., "Emerging family and household types in Europe: issues, definitions and classifications, New family relationships and living arrangements – demands for change in social statistics", in 35th CEIES Seminar, 24-25 January 2008, Warsaw, Poland.
- [4] Twardoch A., „Dostępne budownictwo mieszkaniowe”, *Architecturae et Artibus*, vol 1, no 2, Białystok 2009, pp. 75-77.
- [5] Wojtkun G., „Wielorodzinne budownictwo mieszkaniowe w Polsce – w cieniu wielkiej płyty”, *Przestrzeń i forma*, vol. 10, 2008, pp. 175-194.
- [6] Dobkowska A., *Stopień przeludnienia mieszkań w Polsce na tle standardów europejskich*. Available: <https://www.locja.pl/raport-rynkowy/przeludnione-mieszkania-w-ue,107,%2001.2018>. [Accessed: 1 Nov 2019]
- [7] Deloitte, *2017 Property index: Overview of European Residential Markets*. Report 6<sup>th</sup> edition, July 2017. Available: <https://www2.deloitte.com/content/dam/Deloitte/at/Documents/real-estate/property-index-6th-edition-2017.PDF> [Accessed: 1 Nov 2019]
- [8] Deloitte, *2019 Property index: Overview of European Residential Markets*. Report 8<sup>th</sup> edition, July 2019. Available: <https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/realestate/lu-property-index-2019.pdf> [Accessed: 1 Nov 2019]

- [9] Statistic Poland, *Housing Constructions*. Quarterly reports of Statistics Poland. Warsaw, 2018. Available: <https://stat.gov.pl/en/topics/industry-construction-fixed-assets/construction/housing-construction-i-iii-quarter-2018,2,29.html> [Accessed: 1 Aug 2019]
- [10] Statista, “Total number of dwellings in Europe in 2018, by country”, Available: <https://www.statista.com/statistics/867687/total-number-dwellings-per-one-thousand-citizens-europe/> [Accessed: 1 Aug 2019]
- [11] Muzioł-Węclawowicz A. et al. *Mieszkalnictwo społeczne. Raport o stanie polskich miast*. Obserwatorium Polityki Miejskiej IRMIR, Warszawa 2018. Available: [http://obserwatorium.miasta.pl/wp-content/uploads/2019/03/Mieszkalnictwo-spo%C5%82eczne\\_Raport-o-stanie-polskich-miast\\_Alina\\_Muziol\\_Kamil\\_Nowak\\_Obserwatorium\\_Polityki\\_Miejskiej.pdf](http://obserwatorium.miasta.pl/wp-content/uploads/2019/03/Mieszkalnictwo-spo%C5%82eczne_Raport-o-stanie-polskich-miast_Alina_Muziol_Kamil_Nowak_Obserwatorium_Polityki_Miejskiej.pdf) [Accessed: 1 Aug 2019]