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### The Spatial Diversity of the Social Housing Stock in the Voivodship Capital Cities of Poland<sup>1</sup>

**Abstract:** The Polish municipalities are obliged to act directly in the housing market by satisfying the housing needs of people who cannot do it themselves due to their financial or personal situation. Social flats are used for this purpose. In 2009, cities such as Wroclaw, Lodz and Cracow had the share of social housing in the municipal stock at a very low level (Lodz and Wroclaw below 3%, Cracow approx. 4%). In 2016, the situation changed – some cities significantly increased their share of the social housing stock, while in others the share remained at a low level. Cracow currently has approx. 20% of the social housing stock in its municipal housing stock, but Wroclaw and Lodz have the share of social housing stock at the level of 4%.

The authors have decided to examine whether the observed trends have led to the convergence of social housing stock among voivodship capital cities and what was the role of socio-economic factors in the investigated process. Research methods in the form of critical analysis of literature, review of documents and panel data econometrics were used.

**Keywords:** social housing in Poland, municipal housing stock, convergence

JEL: R21, R31, H70

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### 1. Introduction

The scope and division of tasks of public entities as well as the size of intervention in the market mechanisms and instruments they use depend on the role that the broadly understood state wants to fulfil at the central and local level. Significant changes can be observed in this sphere, both in terms of adopted ideologies and economic possibilities. We are dealing with a general market-oriented trend, limiting the role of the state in providing goods as well as services and reducing its expenditure (Benington, 2011). In the cultural sphere, the neo-liberal approach favours the individual in relation to the community, the consumer in relation to the citizen, the economy in relation to society, and places competition above cooperation (Sennet, 2003; Cooper, Lousada 2005).

The broadly understood state defines its duties and tasks, striving to provide goods and services, but its activities are often fragmentary, not systemic, hence the results are felt by individual entities, families, without an impact on society. It seems that this approach does not produce desired and long-term effects (Benington, 2011). Public entities should act in a systemic way, strengthen community tendencies, as well as create conditions for building civil society and social capital. In this context, it is important to mention the growing importance of Local Welfare Systems (LWS). The welfare state crisis has caused a shift in the local direction (Andreotti, Mingione, Polizzi, 2012). Three main reasons initiating this process are indicated: a higher level of efficiency resulting from a better adaptation to local conditions, greater social participation stemming from the fact that it is easier to mobilise citizens at a local level by involving them in decision-making processes, and a more sustainable system created by reducing costs which results from defining rigorously public responsibilities and determining related expenditure. Local Welfare Systems are understood as dynamic processes in which social, economic and cultural conditions cause the formation of diversified systems between formal and informal participants in social and economic life involved in the creation and implementation of policies. Also, in the framework of LWS, it is determined who should be given assistance (Mingione, Oberti, 2003). In this approach, housing and related duties are of great importance. Demand for available social dwellings is constantly growing due to the emergence of new groups of people excluded or in need of support. The reasons for this increased demand are globalisation that increases competition between cities at the expense of their citizens' well-being, financialisation that transforms areas previously designated for social housing into property development sites, making the labour market more flexible in a way that makes employment unstable, low-paid jobs, and forced part-time work hours, which has contributed to the growth of the working poor group, as well as state restructuring and privatisation of public services (Cassiers, Kasteloot, 2012). In addition, problems are created by the movement of large

groups of people, often from other cultural backgrounds, without knowledge of the language and culture of the country in which they live, and without the possibility of taking up employment. In addition, societies of developed countries are ageing, which generates new needs and costs. The symptoms of these processes and phenomena are the increase in the number of homeless people and squatters and the number of evictions, as well as the return of young people to their parents' homes due to a lack of financial means to live independently.

There are potential solutions at the local level, the local government, however, is not able to apply them without the support of the state (Sellers, Lidström, 2007; Szelągowska, 2011). Local governments have become the main decision-makers in local matters, although they must operate within institutional frameworks – to comply with legal norms established at the central level.

It is emphasised that one of the urban social sustainability factors is decent housing (Dempsey et al., 2011). The availability and standard of housing are among the components of Quality of Living Index. This index includes 450 cities and it indicates the quality of life of their residents (Quality of Living Index 2018).

Local governments, which are most often responsible for meeting the housing needs of their citizens, have to make many difficult choices, as limited financial resources make it impossible to meet all the existing needs. The scope of implementation depends also on the approach of local authorities to the needs of citizens and the ideology that determines the choices made. The approaches and means used may vary.

The Polish municipalities are obliged to act directly in the housing market by satisfying the housing needs of people who cannot do it themselves due to their financial or personal situation. Social flats are used for this purpose. Providing social premises is a huge problem for many municipalities, which results from a lack of vacant flats in the existing municipal stock and very small acquisition of new units (Przymeński, 2017; Szyszka, 2017). The obligation of social premises provision is realised to a varied extent, only some cities manage to improve significantly the availability of social housing. In 2009, cities such as Wroclaw, Lodz and Cracow had the share of social housing in the municipal stock at a very low level (Lodz and Wroclaw below 3%, Cracow approx. 4%). In 2016, the situation changed - some cities significantly increased their share of the social housing stock, while in others the share remained at a low level. Cracow currently has approx. 20% of the social housing stock in the municipal housing stock, but Wroclaw and Lodz have its share at the level of 4%. The authors have decided to examine whether the observed trends have led to convergence of social housing stock among voivodship capital cities and what was the role of socio-economic factors in investigated process. Research methods in the form of critical analysis of literature, review of documents and panel data econometrics were used.

# 2. The outline of the housing situation in the voivodship capital cities of Poland

### 2.1. Demographic and economic differences and similarities

The voivodship capital cities of Poland are characterised by a diversified size and population as well as the level of obtained income and expenditure incurred. Table 1 presents selected data showing differences and similarities between the analysed cities. Warsaw has the largest population and population density per 1 km, while Zielona Gora is the smallest in terms of population and also the least densely populated – see Table 1. Remuneration received by residents in relation to the average income for the whole country is proof of a diversified economic situation, there is no doubt about the primacy of Warsaw as the capital city, while residents of Katowice, Gdansk, Wroclaw and Poznan earn well above average, the lowest remuneration, just over 90% of the average national income, is received by inhabitants of Kielce, Zielona Gora, Bydgoszcz and Bialystok.

Table 1. Selected indicators for the voivodship capital cities in Poland 2016

City	Popula- tion	Popula- tion per 1 sq. km	Average gross monthly remuneration in relation to the national average (Poland = 100)	Registered unemployment rate among people of working age (%)	City income per capita	City expenditure per capita ca
Wroclaw	637 683	2 178	111.9	2.6	6340.06	6205.83
Bydgoszcz	353 938	2 011	92.1	3.8	5 019.00	4819.03
Lublin	340466	2309	97.2	6.2	5 3 7 9 . 7 7	5 417.94
Zielona Gora	139 330	501	91.4	3.5	5 187.15	4 981.43
Lodz	696 503	2 3 7 5	98.6	6.6	5 593.99	5 496.58
Cracow	765 320	2342	108	3.5	6099.34	6122.59
Warsaw	1 753 977	3 391	133.8	3.2	8 417.92	7 884.78
Opole	118 722	1 2 3 0	102	4.9	6 135.63	6110.10
Rzeszow	187 422	1 611	100.7	6.7	5 658.36	5 338.71
Bialystok	296 628	2904	92.5	6.1	5 285.21	5 136.96
Gdansk	463 754	1 770	119.3	2.9	6034.78	5 789.61
Katowice	298 111	1 811	122.9	3.3	5 861.73	5 383.88
Kielce	197704	1 803	91.4	7	5 634.19	5 818.36
Olsztyn	172 993	1 958	99.2	4.2	5 9 7 4 . 4 3	5 293.50
Poznan	540 372	2 0 6 3	111.2	2	6006.55	5 949.22
Szczecin	404878	1 347	105.8	3.3	5 554.55	4975.35

Source: Central Statistical Office

The unemployment rate is the lowest in Poznan, Wroclaw and Gdansk, and the highest in Lodz, Rzeszow and Lublin, the difference reaches 4.6 percentage points. The cities receive income and incur expenditure, the highest income per capita is obtained by Warsaw, Wroclaw and Opole, and the expenditures of these cities are also high. The lowest income per capita is obtained by Bydgoszcz, Zielona Gora, and Bialystok, these cities also have the lowest expenditures, additionally, Szczecin appears in this group.

The analysis of location of the cities shows that there is no spatial concentration of cities that are characterised by the highest or lowest values of indicators presented in Table 1, e.g.: Zielona Gora is located near Wroclaw and Poznan. The primacy of Warsaw, Poznan and Wroclaw is clearly visible in comparison with the other cities.

### 2.2. The size of the housing stock of the analysed cities

Figure 1 presents data on the size of the municipal housing stock in the individual voivodship capital cities per 1000 inhabitants. Despite changes in the size of the municipal housing stock between 2009 and 2016, Lodz, Wroclaw and Katowice still remain the cities with the most municipal premises per 1000 inhabitants. A diversified scale of reduction in the municipal housing stock (mainly due to privatisation) can be noted (Kucharska-Stasiak, 2010; Cesarski, 2011). The privatisation of the municipal housing stock is conducted in Poland on the principles adopted independently by the individual municipalities. It is the municipal council that decides whether to sell the stock and at what price (Tölle, 2007). The statutory regulations in force governing this process relate to the rights of tenants – they are entitled to obtain discounts, and it is also not allowed to sell the whole building with tenants to an investor without asking tenants whether they want to buy the occupied flat. However, it is possible to return the entire building to a person who demonstrates his or her ownership rights (e.g.: he or she is the heir of the previous owner who was illegally deprived of ownership in the socialist period). In this case, the claim takes precedence over tenants' rights. If the building is given back to the previous owners, its tenants become tenants in the private housing stock and have a choice to pay the rent specified by the new owner or look for new accommodation.

For the municipalities that own the housing stock, the mass privatisation process began in the mid–1990s. In 1995, the city of Lodz had a 28.5% share in the total housing stock of the city, in Wroclaw the share amounted to 32.7%, while in Gdansk to 30.7%. In 2016, those figures were 12.4%, 11.7%, and 8.1% respectively, which shows the scale of changes.

In 2009–2016, the cities such as Bialystok (37% reduction), Zielona Gora (34% reduction) and Gdansk (32% reduction) were the fastest to dispose of their own housing stock. The processes were much slower in Lublin (3.9% reduction) and Katowice

(6.9% reduction). The size of the municipal housing stock and the dynamics of changes are not correlated, as the housing stock was disposed of to a significant degree by cities which had both large and small municipal housing stock per capita.

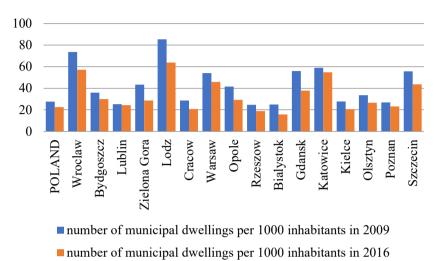


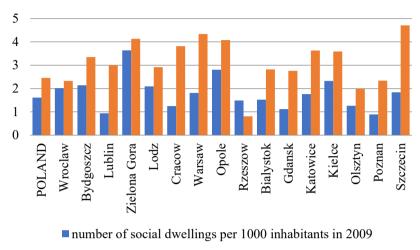
Figure 1. The municipal housing stock in the voivodship capital cities in Poland Source; own elaboration based on the Local Data Bank of the Central Statistical Office

The municipalities are obliged to provide social housing and temporary accommodation. Until now, social housing dwellings, which by definition can have a low standard and a small area (minimum 5 sq m per person, 10 sq m for a single-person household), have been selected out of the municipal housing stock. After changes in regulations that will come into force in April 2019, there will no longer be separate stock of such premises, it will be replaced by social leases of dwellings remaining in the municipal housing stock (The Act on the Protection of Tenants' Rights).

A social housing dwelling is granted when the applicant meets the conditions imposed by law and defined independently by each municipality (by way of an ordinance of the municipality council). The statutory criteria concern the necessity of providing premises for evicted persons, and the criteria determined by the municipality most often concern the income obtained and a difficult life situation. In practice, in the absence of a sufficient number of social housing dwellings, the municipalities do not comply with their statutory obligations and often limit their activities only to providing housing for persons to whom the court has granted the right to social housing in eviction proceedings (Zaniewska at al., 2010). Figure 2 presents data on social housing dwellings per 1000 inhabitants.

Apart from one exception (Rzeszow), an increase in the number of social premises can be observed everywhere, but the pace of this process varies significantly. Undoubtedly, the leaders in the dynamics of increasing the stock of social

housing are Lublin and Cracow, while the city with the largest number of such premises per 1000 inhabitants is Szczecin.



■ number of social dwellings per 1000 inhabitants in 2016

Figure 2. The social housing stock in the voivodship capital cities in Poland Source: own elaboration based on the Local Data Bank of the Central Statistical Office

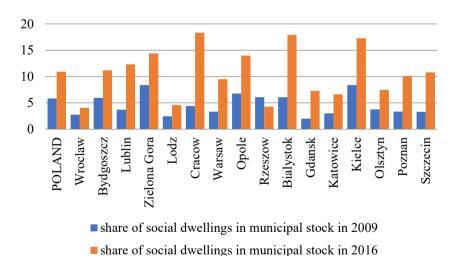


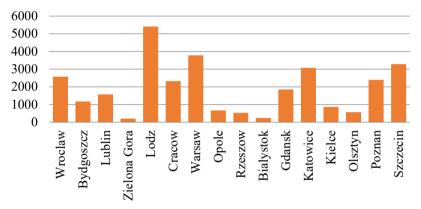
Figure 3. The share of the social housing stock in the municipal housing stock in the voivodship capital cities in Poland

Source: own elaboration based on the Local Data Bank of the Central Statistical Office

The situation related to the share of the social housing stock in the municipal housing stock is slightly different – Figure 3. If we assume that municipal premises are to be primarily allocated to the most needy, then the share of social housing

should be high. Cracow, Kielce and Bialystok seek to implement this idea, as the share of the social housing stock in the municipal housing stock reaches 17–18%.

The number of social housing dwellings provided by the municipality does not indicate the scale of needs, as it is an expression of local housing and social policy, on the one hand, and financial possibilities, on the other. It is common knowledge that the social housing stock in Poland is not sufficient in relation to the existing needs, and in some cities waiting lists are so long and the availability of social premises so low that it takes a few years to be granted social flat. Clearly, in this respect, the municipalities cannot cope. The response of a public entity often occurs as a result of media action, when, for example, a reportage presents the tragic situation of those waiting for housing assistance.



• number of pending valid applications for granting a social housing dwelling and temporary accommodation

Figure 4. The unmet housing needs in the voivodship capital cities in Poland Source: own elaboration based on the Local Data Bank of the Central Statistical Office

So far there have been no systemic changes, but starting April 2019, it will be possible to rent every municipal dwelling based on the so-called social lease. The problem, however, is also a lack of vacant municipal flats, as they are occupied by current tenants whose life and financial situation has not been verified. After the entry into force of the new regulations, only new contracts will be verified. The scale of municipal failure to provide social housing is not made public. The authors have had many difficulties in obtaining even fragmentary data. The size of unmet needs in 2016 is shown in Figure 4.

## 3. Spatial variation of social housing stock and its socio-economic determinants

### 3.1. Research methodology

In the context of changes taking place in the area of social housing stocks, an attempt was made to verify whether observed trends lead to convergence of their levels (measured by the number of social dwellings per 1000 inhabitants), or the process of increasing differences between voivodship cities is observed. Due to the limited availability of data on municipal housing stock, the analysis covered the period of the last 8 years (2009–2016) using the statistics of the Local Data Bank of the Central Statistical Office. The study included two types of convergence: sigma convergence and beta convergence (absolute and conditional).

Sigma convergence occurs when the cross sectional variation in chosen indicators decreases over time (Łaźniewska, Górecki, 2012: 2). Sigma convergence is tested using statistical measures of variation such as standard deviation or coefficient of variation. The progressive decrease in the diversity of economies (regions) in relation to the studied phenomenon confirms the occurrence of sigma convergence.

Beta convergence refers to a process in which less developed economies (regions) show a faster growth rate than developed economies (regions). Beta convergence identifies the so-called catch-up effect (Monfort, 2008). The literature distinguishes absolute and conditional beta convergence. In the framework of absolute convergence, the studied economies (regions) tend to approach the same steady state, while conditional convergence assumes that economies (regions) develop at different levels, and also aim at different long-term equilibrium states (Barro, Sala-i-Martin, 1990; Mankiw, Romer, Weil, 1992).

The statistical significance of the downward trend in the coefficient of variation for social housing stocks in voivodship cities was assessed in order to diagnose sigma convergence. The occurrence of absolute beta convergence was verified on the basis of a dynamic panel model in the following form:

$$y_{i,t} = \alpha + (1 - \beta) y_{i,t-1} + \eta_i + \varepsilon_{i,t}, \qquad (1)$$

where:

 $y_{i,t}$  – the value of the investigated indicator in the *i*-th voivodship city;

 $\beta$  – the convergence coefficient;

 $\eta_i$  – the group effects;

 $\mathcal{E}_{i,t}$  – the error term.

A statistically significant and positive beta parameter confirms the occurrence of the convergence process (cities with a lower initial stock of social dwellings show a faster growth rate), the dynamics of which is calculated according to the formula:

$$D = -ln(1 - \beta). \tag{2}$$

In order to determine the speed of the convergence process, half-life statistics were also estimated, defining the time horizon within which the existing differences in the social housing stocks of voivodship cities will be reduced by half (Kusideł, 2013):

$$H - L = -\frac{\ln\left(0,5\right)}{D}.\tag{3}$$

In the conditional convergence framework, socio-economic factors influencing the growth rate of the diagnostic variable were taken into account. Conditional beta convergence was verified based on the following model:

$$y_{i,t} = \alpha + (1 - \beta) y_{i,t-1} + \rho x_{i,t} + \eta_i + \varepsilon_{i,t},$$
 (4)

where:

 $x_{i,t}$  – the matrix of socio-economic variables determining the growth path of the investigated variable for the *i*-th voivodship city.

Dynamic panel data models (1) and (4) with lagged dependent variable among regressors require the appropriate estimation techniques. According to the literature, the most popular solutions for such models are the Arellano and Bond first-differenced Generalised Method of Moments (FDGMM) and the Blundell and Bond system GMM estimator (GMM-SYS) (Laskowska, 2011: 124; Dańska-Borsiak, 2011). In the following study, the results of GMM-SYS estimations are presented.

The correct specification of models was verified using the Sargan and the Arellano-Bond tests. The first one in the null hypothesis assumes that the instruments included in the model are not correlated with the error term. If the null hypothesis cannot be rejected, it confirms that instrumental variables are appropriate (Rozpędowska-Matraszek, 2015: 162). The Arellano-Bond test examines the autocorrelation of the first and second-order. A GMM-SYS estimator is considered to be consistent and efficient if there is no second-order autocorrelation of the error term. The Wald test was applied to assess the significance of the structural parameters in the models (Müller-Fraczek, Muszyńska, Pietrzak, 2013: 66).

### 3.2. Findings

In the analysed period (2009–2016), an upward trend in the social housing stock of voivodship cities can be observed (Figure 5). The stock increased on average by 90% (with an annual average growth rate at 9%). However, this dynamics was significantly different between individual cities. The coefficient of variation determined for the adopted variable (in cross-sectional terms) showed a statistically significant downward trend. The decrease in the diversity of voivodship cities in terms of social housing stock amounted to 0.9 percentage points annually. This confirms the occurrence of sigma convergence in the studied area of municipal housing.

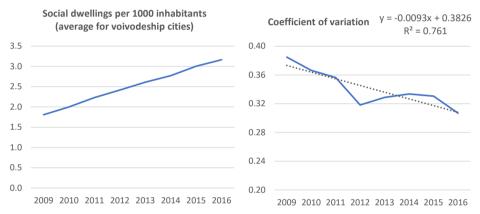


Figure 5. Changes in social housing stock of voivodship cities (social dwellings per 1000 inhabitants)

Source: own elaboration

In the next stage, using the dynamic panel models presented earlier, the absolute and conditional convergence was verified. In the conditional convergence analysis among its potential determinants, a broad spectrum of socio-economic factors was initially taken into account, affecting both the demand and the supply of social dwellings. The list of variables included in the research and their correlation with the dependent variable (the social housing stock) are presented in Table 2.

In the final form of the model, among the variables that significantly affected the beta convergence, the municipal housing expenditures per capita and the number of divorces per 1000 inhabitants were included. The impact of other socio-economic factors turned out to be statistically insignificant. The estimates of absolute and conditional convergence for social housing stock are presented in Table 3.

Table 2. Correlation between the number of social dwellings per 1000 inhabitants and selected socio-economic variables for 16 voivodship cities

*7 * 11	Correlation coefficients								
Variable	2009	2010	2011	2012	2013	2014	2015	2016	Average
Total housing allowances (in PLN 2010 = 100)	-0.27	-0.17	-0.11	-0.17	-0.20	-0.15	-0.20	-0.27	-0.19
No. of housing allowances per 1000 inhabitants	-0.21	-0.13	-0.03	-0.25	-0.14	-0.17	-0.19	-0.21	-0.17
Property prices (in PLN per sq. m 2010 = 100)	-0.45	-0.45	-0.48	-0.39	-0.39	-0.21	-0.14	-0.02	-0.32
Migration balance per 1000 inhabitants	-0.02	-0.13	-0.14	-0.06	-0.01	0.04	-0.09	-0.35	-0.09
Divorces per 1000 inhabitants	0.20	0.30	0.05	0.38	-0.13	0.39	0.14	0.05	0.17
Average monthly salary (in PLN 2010 = 100)	-0.26	-0.21	-0.08	0.00	-0.01	0.11	0.15	0.15	-0.02
Unemployment rate	0.19	0.19	0.21	0.01	0.06	0.07	-0.06	-0.19	0.06
GDP per capita (in PLN 2010 = 100)	-0.16	-0.13	-0.09	0.01	0.08	0.16	0.21	0.23	0.04
People at non-working age to 100 peo- ple at working age	-0.01	0.05	0.11	0.21	0.37	0.29	0.26	0.44	0.21
Population 85+ per 1000 inhab- itants	-0.17	-0.16	-0.08	-0.04	0.14	0.07	0.19	0.26	0.03
The percentage of people living below the stat- utory poverty line (voivodship data)	-0.44	-0.52	-0.66	-0.47	-0.58	-0.29	-0.60	-0.61	-0.52
No. of people abusing alcohol (voivodship data)	0.47		0.02		0.06		0.51		0.26

Variable	Correlation coefficients								
variable	2009	2010	2011	2012	2013	2014	2015	2016	Average
Housing pur- chasing power of households (no. of sq.m.	0.32	0.49	0.47	0.51	0.46	0.39	0.47	0.20	0.41
available for an average monthly salary)									
Municipal revenues per capita (in PLN 2010 = 100)	-0.03	0.01	0.00	-0.15	-0.19	-0.05	0.01	0.18	-0.03
Municipal expenditures per capita (in PLN 2010 = 100)	-0.04	-0.01	-0.14	-0.10	-0.12	-0.11	-0.20	0.19	-0.07
Municipal housing expenditures per capita (in PLN 2010 = 100)	0.04	0.13	0.30	0.21	0.38	0.49	0.54	0.51	0.32

Source: own work

The Sargan test confirmed the correct specification of both models (instrumental variables were not correlated with the error term). No second-order auto-correlation of the error term was found. The Wald test indicated the significance of autoregressive parameters.

The beta coefficients calculated on the basis of the autoregressive parameters were positive and statistically significant. This confirms, therefore, the convergence of social housing stock among voivodship cities. The rate of absolute convergence was estimated at 4.1% per year, while the H-L measure was at the level of 17.05 years. The higher coefficient for conditional beta convergence at 10.2% per year confirmed the important role of the socio-economic variables included in the model in determining this process. The faster course of conditional convergence is also reflected in the H-L statistics, amounting to 6.82 years in this case.

However, the obtained results should be interpreted with some caution. The relatively short period of analysis adopted in the study (due to limited data availability) does not necessarily have to reflect long-term changes in the social housing stock. The area of convergence identification, covering public housing resources, is also specific. Changes in the public housing stock are not always dictated by rational decisions resulting from the analysis of the housing needs of the local community or the financial possibilities of local governments. Political factors, in many cases also have a significant impact on municipal housing.

	GMM-SYS Estimator					
	Absolute beta convergence	Conditional beta convergence				
LnSocialHousing(-1)	0.960	0.903				
	(0.000)	(0.000)				
LnHousingExpenditures	_	0.039				
		(0.058)				
LnDivorces	_	0.144				
		(0.095)				
Beta coefficient	0.041	0.102				
Half-life	17.05	6.82				
Residual standard error	0.163	0.159				
AR(1)	-0.908	-0.800				
	(0.364)	(0.423)				
AR(2)	-0.088	0.265				
	(0.929)	(0.791)				

Table 3. The absolute and conditional convergence estimates

The level of statistical significance presented in parentheses.

Source: own work

11.966

(0.991)

(0.000)

1018.58

15.704

(0.943)

(0.000)

140.602

### 4. Conclusions

Sargan test

Wald test

In the countries of Western Europe, Local Welfare Systems are gaining importance in the face of the welfare crisis, as it is recognised that they are able to provide goods and services more effectively to residents and mobilise their capabilities for the common good. In Poland, the municipality is an independent unit, within the current legal order its legislative and executive bodies choose what tasks will be implemented and to what extent. It has formal legal tools to ensure the well-being of their citizens, but often these solutions cannot be applied because of the modest financial resources.

None of the analysed voivodship capital cities were fully fulfilling their obligation to provide social housing, moreover, the scale of unmet needs is very significant. The socialist legacy still visible in the legal framework, blocking the possibility of verification of entitlements to municipal premises, combined with a growing group of people in a difficult life and financial situation means that the municipalities, though they are the owners of the housing stock, cannot satisfy demand for social housing.

The problem of satisfying housing needs is multidimensional and requires a great deal of research. The work presented is a part of a larger project, hence it indicates partial results, but one cannot forget about the broader context. The number of social dwellings seems to be a result of not socio-economic determinants but simply the financial possibilities of a given municipality. The number of dwellings does not result from the systemic approach but from fragmented ad hoc activities. First of all, there are no financial resources available to meet housing needs in the segment of social housing, and it seems that such funds should come not only from local budgets. The possibilities of co-financing the construction of social housing dwellings from the central budget are limited by the amount of money allocated for this purpose. Both at the local and central level, social housing has not been considered as important so far.

The conducted research revealed a significant variation in the social housing stock of the voivodship capital cities. This is influenced by a number of factors of a social and economic nature, but also as confirmed by the practice of political factors. Between 2009–2016, however, this variation showed a decreasing tendency, thus confirming the occurrence of sigma convergence. The obtained results also indicate the existence of absolute beta convergence at the rate of 4.1% and conditional beta convergence at a rate of 10.2% with a significant role of municipal budget expenditures on the housing as well as social changes (i.e. the number of divorces per 1000 inhabitants).

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## Przestrzenne zróżnicowanie zasobu mieszkań socjalnych w miastach wojewódzkich w Polsce

**Streszczenie:** Polskie gminy mają obowiązek zaspokajania potrzeb mieszkaniowych osób, które samodzielnie nie mogą tego zrobić ze względu na sytuację materialną czy osobistą. Służą do tego mieszkania socjalne. W 2009 roku udział mieszkań socjalnych w zasobie komunalnym w takich miastach jak Wrocław, Łódź i Kraków był na bardzo niskim poziomie (Łódź i Wrocław poniżej 3%, Kraków około 4%). W 2016 roku sytuacja zmieniła się – niektóre miasta znacząco powiększyły udział zasobu socjalnego. Kraków ma obecnie około 20% mieszkań socjalnych w zasobie komunalnym, ale we Wrocławiu czy Łodzi ten udział pozostał na niskim poziomie (4%).

Autorzy postanowili zbadać, czy zaobserwowane zmiany prowadzą do konwergencji zasobu mieszkań socjalnych w wybranych miastach i jaki wpływ na badany proces wywarły czynniki społeczno-ekonomiczne. W badaniach wykorzystano krytyczną analizę literatury i dokumentów oraz dynamiczne modele panelowe.

**Słowa kluczowe:** mieszkania socjalne w Polsce, gminne zasoby mieszkaniowe, konwergencja

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