Municipal Housing Resource Management System: Element of Polish City Management Strategy or Housing Policy?

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Abstract. Issues related to the housing problems are significant in every phase of economic growth. The functioning of this sector combines economic, legal, social and political elements, but this study focuses mainly on the economic and social ones which should influence the shape of the legal and economic system as a factor that supports the effectiveness of housing mechanisms. As example, the analysis of the demographic factors leads to the conclusion that the prognoses for the future need to take into account current demographic parameters, including the substitution of generations. A detailed analysis shows that the growth of this market is closely related to satisfying specific housing needs of the ageing society whose lifespan is getting increasingly longer. As it has also been shown, the social changes within the average Polish family, new patterns and lifestyles affect the younger generation’s expectations and needs. The process is particularly important when the demographic slump or baby boom generations start entering the job market and, subsequently, influence the demand for apartments. The aim is to answer the question: do demographic processes connected with housing needs play a significant role in the city strategy? Or housing problems it's only local political problems? In paper Author discus about strategy and local housing policy. What is more, housing problems connected with local government policy has become a new research area. It has offered new opportunities to apply numerous statistical methods and instruments.

1. Introduction

Economic processes, and consequently local development, are closely related to the demographic potential of a city, which is defined by two elements: the size of the human population (number, structure and processes characterizing it) and the life potential of the population. An indispensable factor in the growth of the demographic potential is ensuring decent housing conditions, adequate to the abilities and economic status of individual social groups. It is also important to adapt housing conditions to the physical needs of the age groups of the population. Providing a place where basic life needs can be met, apart from job creation, is the minimum requirement that local governments have to meet in order to maintain a proper population structure in the city.

At this stage, two tools for building a development concept are available to the city's managers: city's development strategy and sector-specific policies. A development strategy is the overarching document programming the development of a city in the long-term perspective. It indicates those areas in which measures and actions will be the most purposeful and effective. A strategy is the basic instrument supporting local authorities in the process of development management. The document defines the policy directions and objectives that should be achieved within a given period of time. The vision of development formulated in this document is aimed at achieving development goals in a defined perspective and is reflected in the mission of a city or region. At the same time, a strategy, by identifying
the strategic objectives, derives from it directional objectives which define directions of activities leading to the implementation of the adopted vision and mission. Strategic objectives of cities most often refer to creating conditions for stable and sustainable development, based on a competitive economy and entrepreneurship of the inhabitants, as well as social activity, with optimal use of the existing resources. Hence, the basis for building a strategy is a proper diagnosis of phenomena on the basis of which forecasts and achievable objectives are made. Most often, they concern the increase of innovativeness and efficiency of management, strengthening of attractiveness and competitiveness of the region, preservation and protection of natural values, rational management of resources, building an open and competitive community or the increase of identity and social cohesion.

The overarching objective of any strategy is to provide the inhabitants with a high quality of life which leads to the improvement of the demographic potential. Therefore, an indispensable element of the implemented strategic objectives is to ensure the creation of housing conditions within the city limits or urban agglomeration which will prevent unfavourable urbanization processes such as suburbanization [1], gentrification [2] or creation of urban enclaves of poverty. This is achieved both by creating conditions for improving the housing attractiveness of a given city (infrastructural environment) and by creating attractive public spaces, implementing revitalization programs, as well as by introducing appropriate housing policies that support households in the process of obtaining housing. The strategy of a city or region is a basic tool that organizes the process of strategic planning and implementation of the development policy at the regional level. It integrates the objectives of individual local communities with the system of program documents at the regional and national level, as well as with the development paradigm adopted for the state. Development priorities form the basis for the formulation of sectoral development programs and policies.

Housing policy is one of the microeconomic policies implemented by local government units or the state, aimed at correcting the malfunctioning of the housing market [3]. It may concern a narrow degree of interference with market mechanisms or, more broadly, it may involve state interference in all areas that affect the functioning and the shape of the housing market. State interventionism is most often manifested in fiscal policy (tax reliefs), spatial policy (planning tools) and extensive social policy, the element of which is to support specific social groups, economically or socially dependent, in the current of social responsibility for ensuring decent living conditions. The main objectives of housing policy are to provide the entire population with adequate size and quality of housing, in an appropriate environment, at low cost. Within the framework of such a defined objective, one should strive both to create conditions for purchasing or renting flats and to demonstrate care for the quality of available resources. Objectives of housing policy differ in priorities which depend on the economic condition of the state as well as the level of ambition to ensure social and regional balance. The economically weaker states will create conditions for the involvement of equity capital of households in the purchase of property – stimulation of the private apartments segment, the richer ones with a broad social program will strive to eliminate homelessness, develop the social housing system. The state and local authorities have a wide range of housing policy instruments at their disposal which they use to stimulate or cool down market mechanisms and thus support the implementation of housing policy objectives. These are both fiscal and legal as well as organizational policy instruments. These instruments enable the market to be stimulated by a system of tax reliefs, the introduction of favourable conditions for ownership transformations, public outlays on housing investments, and the transfer of funds to groups requiring financial support in the process of obtaining housing.

It results from the presented considerations that a well formulated development strategy should include a long-term housing policy, especially with regard to shaping the demographic potential of the region. Therefore, the aim of this study is to assess the local development strategy and housing policy and instruments used in this policy in the context of social (demographic) changes.
2. Foundations of housing policy

2.1. Striving for ownership – a stimulant or a destimulant of housing policy directions

Ownership, closely linked to the freedom of the individual in society, is the basis of social relations in every era of mankind's historical development. The right to own property is a source of movement of apartments on the market, the basis for releasing capital invested in apartments, and thus determine the activity of entities on the market. In a market economy, therefore, it becomes a desirable right for citizens. Already Aristotle argued that ownership is an incentive to increase economic efficiency because resources that do not have an owner cannot be well used. Deprivation of ownership can only weaken an individual's desire to reduce care for a given good with which he has no emotional connection, and this in turn results in a reduction in efficiency, both socially and economically. Therefore, the social sense of private property is that it generates the most initiatives in people and also diligence and resourcefulness. Plato also drew attention to the need to separate public and private interests (ownership). According to both philosophers, not separating these interests creates the conditions for corruption. In the source literature, sociologists note that ownership is a necessary condition for freedom, which determines the social and economic effectiveness that determines economic development.

Private property as a means of ensuring the individual's freedom was the foundation of liberal theories and the seed of the capitalist economy. However, a liberal approach to the treatment of ownership has raised questions about the role and limits of state intervention in ownership. The issue under discussion ranges from the libertarian direction which accepted ownership as the supreme right in which the state should not intervene, to social liberalism which accepts the redistribution of property income from the rich to the less affluent, in order to equalize opportunities and ensure a minimum social status for the latter [4]. Neo-liberals, on the other hand, noticed the dangers in the exercise of civil rights as a result of too much state intervention in the sphere of ownership, calling for the constitutional guarantee of ownership rights. Conservatives stressed that ownership was anchored in the tradition that ensured harmony and sustainability of the social order. The mainstream economy and sociology of the nineteenth and twentieth centuries recognized the positive impact of ownership on social and economic development (except for Marxists and socialists), emphasizing ownership as a manifestation of individual freedom (I. Kant, G. Wilhem, F. Hegel). Although some of them like J.S. Mill noted the positive role of the state in increasing the economic efficiency, [5]. The 1950s brought about a change in the attitude of economists towards the role of ownership in the management process, but also towards the recognition of individuals as owners and main actors in economic life. Nowadays, in the era of globalization, there is a belief that there is a need to combine property in the hands of business entities, which thus have greater potential to introduce innovation and sustainable development, [6].

Ownership can also be considered with regard to its psychological dimension. It largely fills human consciousness, and this means that it is the motor that stimulates individuals to act. The willingness to have one's own apartment is a stimulus to make efforts in this direction, to demonstrate the activity which may manifest itself in taking up additional employment, migration to areas where flats are cheaper, or to take direct actions on the market (e.g. changing apartments, building a house with an economic system, etc.). Ownership of an apartment can also be treated as a protection against unforeseen events, it is a good that can be passed on to future generations, and it is often the only valuable material good. Ownership also gives the individual a social position, is a distinguishing feature of his or her status and is therefore desirable in certain cultures or social groups. Along with ownership, there is a strong desire for profit which generates optimal use of the assets, eliminates mismanagement and waste. Taking care of ownership leads to the search for newer, better technologies and solutions, contributing to the change in the standard and quality of apartments offered on the market, i.e. introducing innovations to the housing sector.
Ownership of residential property is associated with its social functions, which are conceptually opposite. On the one hand, the importance of ownership for social and economic development was indicated, and on the other hand, the implementation of social objectives forces restrictions on ownership rights. Social goals that limit the ownership of an individual become destimulants for the development of the market. These restrictions are twofold. On the one hand, there is the restriction of the right to property when the state pursues public objectives by expropriating (depriving of property rights) with compensation for the deprivation of the right to property which is described as fair compensation. On the other hand, the state guarantees social order by restricting the freedom to dispose of the object of ownership. The protection of the public interest is reflected in prohibitions on the use of immovable property for purposes other than those for which the immovable property was erected. Similarly, restrictions on the disposal of property occur in the provisions of building law, fire regulations or local law regulations, which require the owner to behave in a specific way.

2.2. The right to housing in decent conditions

The foundation of housing policy is the right to housing, first formulated in the Universal Declaration of Human Rights in 1948 [5]. According to the declaration, everyone has the right to decent housing conditions, which means that it is necessary to strive both to create conditions for households to meet their housing needs on their own and to provide support for those who do not have sufficient financial resources in this respect. The paradigm of ensuring the freedom to every human being by providing them with housing was extended in 1969 by the right to adequate housing [7], especially for the poorest or disabled as well as for vulnerable social groups.

The right to adequate housing must be interpreted in two ways. On the one hand, it is a possibility to both buy and rent an apartment, adequate to the needs and financial possibilities. Enabling the purchase of an apartment means that the prices of apartments will be at a level which will ensure that the housing needs of the majority of citizens will be satisfied. Therefore, the aim of housing policy is to support housing investments through fiscal mechanisms, legal regulations and pro-housing spatial policy. Creating conditions conducive to the development of lease means launching market mechanisms encouraging investors to engage their own capitals in the construction or purchase of apartments for lease. The high supply of these apartments stimulates the level of market rents, providing conditions for meeting the housing needs of those households which cannot afford to buy an apartment or prefer greater mobility. A part of the housing policy in this case may also be the creation of a state or local government housing stock for rent, with state-controlled rent rates.

On the other hand, the right to adequate housing means that people with disabilities, people with age-related limitations and other vulnerable groups have access to affordable and relevant housing. These are usually social apartments, financed from state funds, with low rents but at the same time increasingly higher technical requirements. Especially in the case of apartments for disabled persons or elderly persons, the quality of these apartments should be high in the scope of various facilities or safeguards [8]. Interventionism may refer to fiscal tools addressed to investors building apartments for such a distinguished group of recipients or transferring these tasks to local governments, as a result of creating a stock of social housing and other forms of lower quality social housing, such as nursing homes or night shelters. Most European states also promote the view that ensuring effective exercise of the right to housing requires promoting access to housing of an adequate standard, adapted to the needs of families. This is a trend which is part of a pro-family policy in which the state supports the economic, legal and social protection of family life. This also means ensuring a place of residence in an appropriate environment, observing the principles of sustainable development and family safety [9].

A breakthrough document indicating that the state is responsible for creating a legal and economic environment for the effective functioning of the housing market was the work published in 1990 by the UN Settlement Centre [10], [11], on the basis of which World Bank experts formulated the assumptions
of housing market policy in their work “Housing: Enabling Markets to Work”, [12]. In the concept of market housing policy, economic goals are given priority. The state is the coordinator of the housing market in this trend, ensuring the best use of limited resources in accordance with social preferences, at the same time ensuring the efficiency of construction production and housing consumption. Additional objectives included social objectives, sustainable development and rational spatial management concepts. This approach was addressed primarily to developing countries, supported financially by the World Bank, in the process of system transformations, such as Poland. As a result, correcting market malfunctions by eliminating barriers to competition in the housing market became for many years the main objective of the housing policy of Central and Eastern European countries. In these countries, the barrier of active housing policy of the state was limited public funds but also a high housing deficit, low quality of resources and domination of multi-family housing, with an unstable ownership structure in favour of the state and local governments.

Housing policy has a direct or indirect impact on the size and quality of the housing stock, the price of housing and the level of rent [13]. In addition, it is connected (feedback) with the economic and social environment (including the demographic one), as well as with the political environment. It influences the environment through effects and achieved objectives, but it is also the effect of phenomena and mechanisms observed in this environment. Therefore, it cannot be analyzed in isolation from the housing market itself and its legal, political, economic and social environment.

3. Directions of changes in housing in Poland after the political reform

Until 1990, owners of apartments in Poland, apart from natural persons (single-family houses, in few cases owners of tenement houses) and housing cooperatives, were local self-governments (the so-called communal apartments), work establishments (company apartments, state-owned farm apartments) and the State Treasury (uniformed services apartments, apartments administered by state offices and institutions). In the conditions of political changes and adjustment of the economy to the market system, the inalienable housing stock on an unstable market was often traded on the market due to a single legal regulation [14]. The sale of apartments owned by local governments is subject to strong state intervention and was often carried out with the use of a number of concessions, therefore not at market price [15]. The possibility of selling communal apartments to their tenants without a tender, the enfranchisement of legal persons and subsequent legal regulations after 1990 have created a new, marketable stock of residential real estate in residential communities' buildings. Apartment ownership also guaranteed the right to inheritance and limited state intervention at the level of individual rights to housing (the so-called special lease scheme). Apartment as a capital asset, a deposit for future generations (heirs) became available for a wider group of households. On the other hand, the right to dispose of an apartment sanctioned the market of renting out private housing resources through occasional lease (in the case of natural persons) and lease carried out as part of business activity. The direction and intensity of these changes resulted from the spatial diversity of ownership in Poland, which was marked by historical changes and various influences.

The right to housing is enshrined in the Basic Law (Article 75 of the Constitution of the Republic of Poland). According to this provision, public authorities are obliged to conduct policies conducive to satisfying the housing needs of citizens. They also prevent homelessness, support the development of social housing and support citizens' efforts to obtain their own homes. The Polish housing market is a market of short-term, several-year changes. It is a market of unmet needs, resulting from both war losses and the state's housing policy in the last century. Such a state causes immediate demand to appear with each housing-oriented intervention of the state and with each sign of improvement in the material situation of households. The difficulty in approaching the level of equilibrium on the Polish housing market is caused by speculative actions and excessive, unjustified by the construction costs and the price of construction land, increases in the prices of housing.
The functioning model of the Polish housing market can be based on J. Kemen's proposal [16] in which both the state and the market are the foundations of connections between the components of the housing sector (accessibility and resources) and households are the customers. They can be broken down according to the income achieved. In the first group there are those which have their own financial means sufficient for the purchase of an apartment and those which do not have savings but have the so-called creditworthiness and transform the housing needs into demand and satisfy them on their own when buying home on the market. In the group of households with average incomes not sufficient to buy on the free market, the housing needs are usually met in the form of free market rentals. However, due to poor protection of the interests of housing owners, their renting is often still carried out in the grey market, outside the state control. This group is also supported by mechanisms of the state housing policy in the form of preferential loans and tax deductions which allow to shift the demand from apartments for rent to the ownership of apartments. Lack of state support means increased demand for housing lease. The last group of households with the lowest income generates demand only for rented apartments which additionally requires financial support from the state in the form of controlled rents. These are households which usually occupy communal resources. The Polish legal system lacks regulations which would limit the recipients of such aid to households that really need support. Low-rent communal dwellings are occupied by households in each of these income groups. Households requiring social assistance from the state or local authorities should remain outside the market mechanism.

The Polish housing market is usually measured by the quality of resources and not by the value of capital employed on the market. Poland's openness to the inflow of foreign capital contributed to the establishment after 2004 of the first investment funds investing capital in the housing market. In turn, the fall in interest rates in the last several years to the level of developed markets has increased the group of active trading participants, investors purchasing apartments for lease. The direction of development is an effect of the growing consumption of the Polish society as the economic situation improves, but of the adjustment to a change in the number and structure of households, including the preferences of single-person households. Since the beginning of 1990 the Polish market was characterized by both functional demand, which is a function of the value in use of residential properties (especially strongly disclosed until 1999 as a result of consumers' reaction to tax reliefs, later after 2004 as an effect of favourable housing loans), non-functional demand which is a result of external effects on the usability of residential real estate (a change in preferences of Polish households with regard to housing conditions observed after 1995) and speculative demand related to the expectations of price changes in the future (most strongly revealed after 2004).

The Polish housing market is a market covered by the process of suburbanization and expansion of the city into rural areas which is characterized by a loose form of development, its discontinuity and a high percentage of undeveloped land. These processes are facilitated by legal regulations, which favor the changing the status of farm land (from agricultural to residential) within the city limits, but also by the pressure of market participants who, faced with high land prices and the shrinkage of free building areas in cities, are seeking alternative solutions. A characteristic feature of structural changes in Polish cities is the progressive fragmentation of plots of land, especially on the outskirts of cities, intended for housing development. Local authorities, in their efforts to increase tax revenues and to cede housing problems to the society, allowed all these processes to take place. The deepening economic stratification of the city's population, non-adaptation to a new reality, insufficient level of social welfare, resulted in clear divisions of the city's population and a change in its mentality. These changes are translating into the consolidation of spatial enclaves of poverty, especially in the districts where communal housing dominates, and in the future in enclaves of social housing. On the other hand, modern development districts, guarded and fenced housing estates are becoming common as a symbol of modern housing development.
The Polish housing market is in the phase of suburbanization, i.e. searching for cheaper locations at the expense of distance and time of travel. This approach to the location of an apartment is the basis of the W. Alonso's theory of the relationship between the workplace and the demand for services in the city center and commuting costs, and thus lower willingness to pay higher rent for an apartment or price for land for the construction of a house [17]. Numerous studies show that the city center is inhabited by people who earn income from social welfare units, another circle around the city center is made up of households of economically active people, while the outer circle is made up of households of retired people [18]. In Polish cities, the layout is not so clear, it is rather twofold: the city center and peripheral urban areas (old housing estates) are occupied by households of lower material status, while new housing estates in cities and neighbouring communes are occupied by people of higher material status.

Before the political reform, according to the National Census, more than 31.7% of the resource was constituted by flats owned by the state, local authorities or workplaces [19]. Natural persons owned 44% of the dwellings, and one-family houses were also counted here. After the reform, the percentage of owned dwellings increased significantly and new forms of state-supported social housing, the so-called Social Construction Association (TBS), with an offer of apartments for rent, appeared, which by definition could not be privatized but, as a result of the low competitiveness of this offer, can now be transformed into ownership (Table 1).

| Ownership                  | total | city | village |
|----------------------------|-------|------|---------|
|                            | 1988  | 2002 | 1988    | 2002   | 1988   | 2002   |
| Natural persons            | 44%   | 55%  | 25%     | 37.5%  | no data available | 92.4%  |
| House building cooperatives | 24.3% | 28.6%| 35%     | 41.7%  | 0.5%   | 1.4%   |
| TBS                        | not established yet | 0.3% | not established yet | 0.4% | not established yet | 0.0% |
| Workplaces                 | 2.2%  | 12%  | 2.5%    | 14%    | 1.6%   |
| Communes*                  | 11.5% | no data available | 15.8%  | no data available | 2.6%  |
| State Treasury             | 1.7%  | 1.8% | no data available | 1.8%  | no data available | 1.6%  |
| Others                     | 0.3%  | no data available | 0.4%   | no data available | 0.3%  |

a) in 1988, communal resources were in the group of dwellings in the management of local state administration bodies, next to the ownership of natural persons abroad and a part of Treasury resources.

All these social changes and their impact on housing are being accelerated and amplified by demographic changes: falling fertility rates for women, delayed marriages, emigration of young people, growth of the elderly population. Thus, on the one hand, the active housing policy of the state could take place only after the economic situation had stabilized in the last two decades, while unfavourable demographic changes made the housing problem a priority. Strong striving for housing ownership has become a premise for local housing strategies and programs in Poland, which are supported by the state.

4. Local housing policy and strategy based on the example of Szczecin

4.1. Assumptions of the city strategy

The currently binding Szczecin Development Strategy with a perspective until 2025 (SRS 2025) was adopted on 19 December 2011. The document presents the city's vision, mission and sets strategic and
operational objectives, as well as indicates the tools for its implementation and the entities managing and participating in the implementation process. Programming of the long-term and multi-directional socio-economic development of the city required identification of the most important challenges and formulation of the mission, according to which “Szczecin is an open and tolerant city, an attractive place to live and work – a community of inhabitants using the cultural heritage, natural environment values and the setting on the Baltic Sea and the Oder river for sustainable development” [20, 21]. The City's mission is implemented through four strategic objectives and operational objectives.

The strategy indicates those areas in the social, economic and spatial spheres the support of which, within the existing budgetary conditions, will contribute to the most effective social and economic development of the city within the assumed time horizon. The document is based on four development priorities. Under the adopted management concept, the Multiannual Szczecin Development Programme (WPRS) was introduced, which is a collection of projects and strategic tasks dedicated to particular strategic objectives. Competent deputies of the Mayor of the city are responsible for the implementation of particular objectives. The tasks as well as the manner and scope of cooperation of organizational units were reflected in the organizational regulations of the City Hall and in the detailed scope of tasks carried out by organizational units of that office. The programs implement the constitutional principle of sustainable development, based on the principles of partnership, social participation, equal opportunities and territorial cohesion. The aspirations of local authorities are to build intergenerational solidarity, to create space for individual strategies of selecting residents, families and communities, to create a network character of interpersonal relations, to support activities activating the society and the cooperation of various institutions in the scope of helping the residents in need of such assistance.

In the discussed strategy, two operational objectives are strongly related to the housing policy, i.e. I.2 - revitalization and development of urban space and I.3 - supporting the development of effective social services. The main challenges include: halting the suburbanization process, supplementing the urban fabric, revitalizing degraded urban areas, more efficient management of communal property, improving the quality of public services, increasing the level of safety of residents, and protecting the environment and life. Creation of a friendly public space, cooperation with investors on revitalization and investment projects is to make one of the most neglected areas, i.e. the city center, more attractive again. The activities are aimed at retaining young people in the city and attracting new residents.

4.2. Housing policy and demographic trends in the city

The housing policy in the area of social welfare in Szczecin is implemented in the form of housing programs assigned by the city authorities to Towarzystwo Budownictwa Społecznego sp. z o.o. in which the Commune is a 100% shareholder. Actions are aimed at helping specific social groups by means of programs:

- Children's home – addressed to children who remain in foster care.
- A starting home – the program is addressed to adult children of foster care leaving the facility. It means the possibility of staying in a protected dwelling (called an incubator) or obtaining an independent, target apartment.
- Student's home – addressed to students from outside Szczecin. The city rents a dozen or so apartments, in the vicinity of the universities, with low rents.
- Graduate's home – is an offer of apartments for young people with qualifications required to work in industries recognized by the city as key to its development.
- A new home – addressed to families living in communal flats of low standard. As a result of the exchange of household of which income allows them to pay higher rental fees, they receive higher standard apartments for lease. The vacated premises are a resource for low-income households, social housing and replacement homes, for the execution of court eviction sentences.
• A home for a large family – addressed to families with at least three children that, due to the economic situation, are not able to provide themselves with adequate housing. The aid consists in renovating, modernizing and equipping dwellings.

• Senior citizens' home – addressed to elderly residents of the city who need or will need support in the near future. In newly built and modernized buildings, residential units are created, which enable the independent functioning of seniors, adapted to their needs, together with the necessary or improving the functionality of these units accompanying infrastructure. The program also includes the so-called protected units for several people with 24-hour care and support from the Community Family Support Center.

Programs concern only the resources which are the responsibility of the city and are addressed to groups requiring special support or those which determine its social potential. However, in quantitative terms individual measures concern several or several dozen apartments, which in the scale of the city satisfies a small percentage of the needs reported. The city's activities, as defined in the programs and strategy, were mainly influenced by unfavourable demographic changes (Figure 1).

Figure 1. Dependency ratios in Szczecin

In 2016, the W3 dependency ratio was 38.8 (28.7 in 2010), while the pre-working age population per 100 people of working age ratio was 25.9 (24.0 in 2010). The first of them means that the post-war baby boom is shifting to the group of inactive people who require more and more social support, and the baby boom of the 1980s is shifting to the most economically active group which will reach retirement age in 15-20 years. The future low demographic development potential is illustrated by the dynamic growth of the W2 ratio, which in a way illustrates the replacement of generations – almost on every two older people falls one young person (in the pre-working age).

Strong dependence of housing conditions on demographic potential can be indicated by determining the relation of the average usable floor area of an apartment per 1 person as a function of the retirement age population per 100 people of pre-working age ratio (W2) in Szczecin (Table 2, Table 3).
Table 2. Relation of the average usable floor area of an apartment per 1 person as a function of the retirement age population per 100 people of pre-working age ratio (W2) in Szczecin

| Regression analysis | Coefficients | Standard error | t Stat | Value-p |
|---------------------|--------------|---------------|--------|---------|
| Crossing            | 11.927       | 0.6099        | 19.555 | 5.04E-11 |
| W2                  | 0.107        | 0.0051        | 20.991 | 2.06E-11 |
| R²                  | 0.971        |               |        |         |
| Standard error      | 0.3682       |               |        |         |

Variance analysis

|                  | df | SS    | MS    | F      | Materiality F |
|------------------|----|-------|-------|--------|---------------|
| Regression       | 1  | 59.7271 | 59.7271 | 440.6016 | 2.06E-11 |
| Residual         | 13 | 1.7623 | 0.1356 |        |               |
| Total            | 14 | 61.4893 |        |        |               |

This interdependence implies a low replacement of generations rate in the existing housing stock which is not vacated for the younger generation by the older generation, and a declining dwelling inhabitance rate towards increasingly older sole occupants.

5. Conclusions

The problem analysis indicates that in Poland, after the period of economic transformation, a stable long-term housing strategy and policy were not implemented, but only substitutes were introduced in the form of short-term housing programs, in line with the intentions of financing institutions. It was not until the economic recovery of the last decade (including the economic crisis) that local long-term strategies, including housing policy, were built.

It may be assumed that five years of the current strategy in the analyzed city (until 2025) and the adapted housing programs have not brought positive population relations (negative population growth balance at the level of -1.4), but improved the total migration ratio from negative values to 0.3 in 2016. The value of the ratio was most affected by the positive level of the internal migration balance, exceeding the negative value of the foreign migration balance. As far as the housing situation is concerned, there is a noticeable trend towards a growing stock of dwellings occupied by ever older households. This means that the programs adopted for older people should be strengthened towards housing that is qualitatively suitable for people with age-related disabilities.
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