

THE CONDITION AND FUTURE OF BIG SLAB HOUSING ESTATES FROM SOCIALIST TIMES IN VIEW OF COMPARATIVE DATA DERIVED FROM THE POLISH-GERMAN RESEARCH PROJECT CONDUCTED IN LEIPZIG AND KATOWICE. CHAPTER I

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Abstract

The scope of the paper are quality analyses of selected big housing estates erected in Katowice and Leipzig at the time of Socialist, conducted under the framework of an interdisciplinary project run in cooperation between The Faculty of Architecture, Silesian University of Technology and Helmholtz Institute (UFZ) in Leipzig. Due to the on-going depopulation of the city of Katowice and detrimental state and urban policy towards big slab housing estates, aggravated by unrestrained market activity of developers on the market, it should be expected that the examined housing estates in Katowice shall be subjected to the same unprofitable processes that Grünau estate in Leipzig has undergone. In view of the above remarks, it is essential to initiate necessary research into normative scenarios enabling reasonable future demolition works in the selected post-socialist big housing estates, so as not to destroy the existing spatial and social order. The first part includes quality analyses, as well as architectural and urban studies confronted with inhabitants' opinion expressed in surveys and interviews, on the grounds of which SWOT analyses were prepared.

Streszczenie

W artykule zostaną omówione badania nad jakością wybranych osiedli z okresu socjalizmu w Katowicach oraz w Lipsku przeprowadzone w ramach projektu interdyscyplinarnego, we współpracy pomiędzy Wydziałem Architektury Politechniki Śląskiej oraz Instytutem Helmholtza (UFZ) w Lipsku. W związku z przebiegającą depopulacją Katowic oraz niesprzyjającą polityką państwa i miasta wobec tego typu osiedli, a także ekspansyjnymi działaniami deweloperów na rynku, można się spodziewać, że zaczną w nich działać niekorzystne procesy jakim podlegało wielkie osiedla Grünau w Lipsku. W świetle wyżej opisanych uwag, konieczne jest rozpoczęcie koniecznych badań nad scenariuszami normatywnymi pozwalającymi na sensowne dokonywanie wyburzeń w omawianych osiedlach po PRL w przyszłości, które nie niszczyłyby istniejącego w nich ładu przestrzennego i społecznego. Ze względu na rozległość podjętego tematu, artykuł został podzielony na dwie części. Część I przedstawia studia społeczne i analizy jakościowe architektoniczno-urbanistyczne skonfrontowane z opiniami mieszkańców wyrażonymi w ankietach oraz w wywiadach a także analizy SWOT.

Keywords: Housing estates; Social studies; Architectural and urban researches; SWOT analyses.

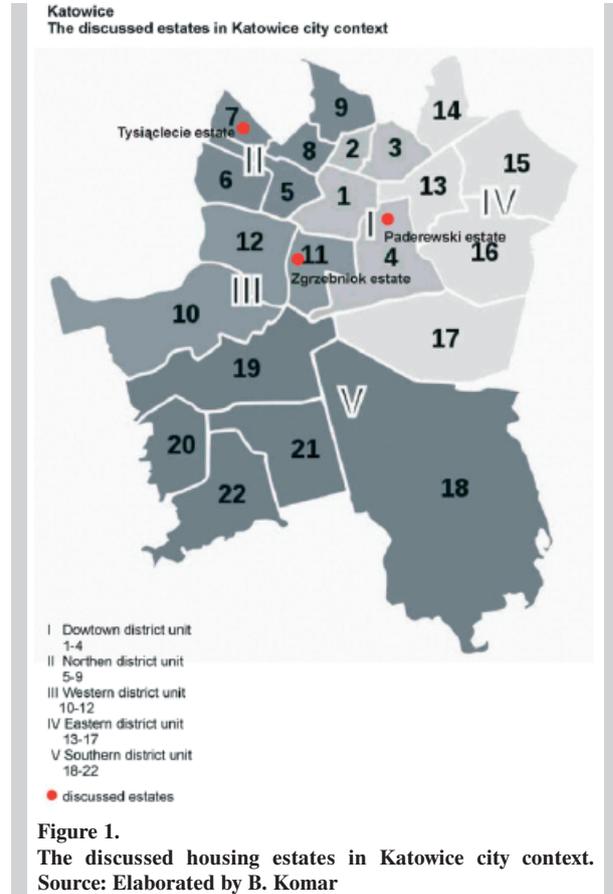
1. INTRODUCTION

In 2011–2012 comparative studies on the selected housing estates in Katowice and Grünau estate in Leipzig were conducted within the framework of the international project: “The past, presence and future of Polish and German big housing estates. A comparative study of the models of their urban development and acceptance – case study of Katowice and Leipzig”. Project No: 2010-21 was financed by the Polish-German Foundation for Research. The Project participants were: the interdisciplinary team consisting of representatives of the Silesian University of Technology (Faculty of Architecture: The Project Manager: Professor Elżbieta Niezabitowska, the executors: DSc Arch. Eng. Beata Komar, DSc Arch. Eng. Beata Kucharczyk-Brus and Faculty of Organization and Management: Marek Niezabitowski, PhD) and University of Silesia (Associate Professor Adam Bartoszek, DSc. Faculty of Social Sciences). The German partners were represented by the research staff at the Faculty of Urban and Environmental Sociology, Helmholtz Centre of Environmental Studies in Leipzig (Professor Sigrun Kabisch, DSc Katrin Grossmann, PhD. Annegrete Haase, PhD).

2. SOCIAL STUDIES

Since 1979 the research workers in Leipzig have been conducting monitoring social studies at Grünau housing estate. In 2009 the 9th study was completed, focused on the level of the inhabitants’ acceptance of their place of occupancy. The main purpose of the Polish-German Project was to find out how a subjective assessment of the quality of the place of occupancy was reflected in an objective expert architectural evaluation of the estates selected for the comparative studies. At the same time, an attempt was made to devise common expert criteria for evaluating the urban condition and land management of the investigated estates, followed by recommendations for housing resources management in consideration of the functional needs of their inhabitants.

As far as Grünau estate is concerned, the German researchers had an opportunity observe the evolution of the inhabitants’ attitude towards their urban environment and architecture, starting with relatively high acceptance in 1979 (66% of satisfied inhabitants), through overt worsening of the satisfaction level, which reached the lowest point at the time of the political and economic transition period in 1992 (35% of satisfied inhabitants), but next followed by an increased level of satisfaction in 2009 (74% of sat-



isfied inhabitants – see Fig. 1). Grünau estate is specific in terms of the scale of its architectural layout. Its construction began in the late 1970s. Located at the periphery of the city of Leipzig, at the distance of about 6 km from the city centre, it was planned to provide accommodation for 80 thousand people, but nowadays it is inhabited by only 45 thousand and offers about 30 thousand rental flats in slab tower blocks. The escape of inhabitants in the 1900s spurred some strategic measures aimed at reducing the number of vacancies – adjusting the number of the occupants by demolition of some buildings or reduction of upper storeys on the one hand; yet, on the other one – evoking fierce competition and fight for clients on the part of the existing housing cooperatives, private administrators and private owners of buildings. Initially, the demolition works were chaotic, made in different parts of the estate, without any specific plan, the outcome of which has cast a shadow on the entire image of the estate and its future development. Many cooperative bodies and private owners of some buildings (8 housing cooperatives and 8 private entrepreneurs) undertook efforts to improve the quality of their buildings and flats and

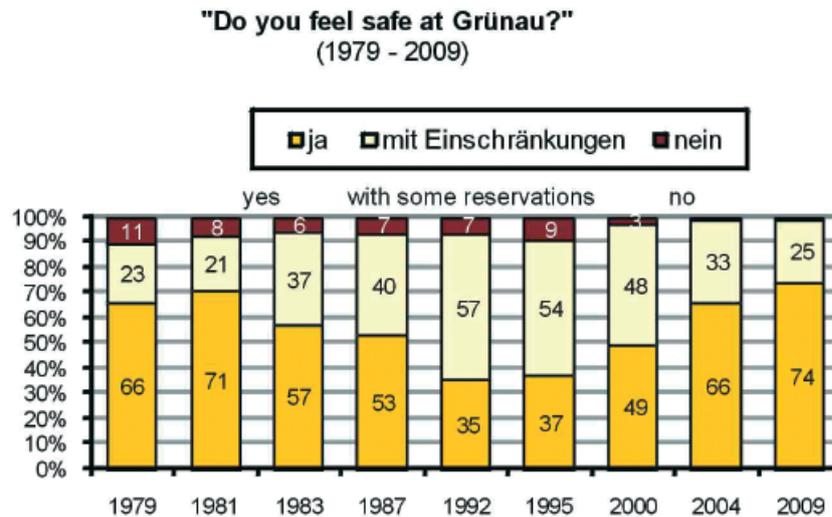


Figure 2.

Results of monitoring studies conducted at Grünau Estate in Leipzig- continuously increasing satisfaction from the housing conditions at the estate. Source: A. Haase: "East-German big housing estates - the present and the future. Case study: Leipzig-Grünau"; LHE Seminar, Silesian University of Technology, November 2012. Under prevailing housing conditions in Poland, the situation is drastically different

alter the estate to changing needs and requirements of users (for example: due to the age structure and family models, etc.).

Attempts at creating development scenarios do not lead to explicit conclusions, as the growth factors are uncertain, starting with problems involved in ageing of the society, and, what is very disquieting for sociologists, social polarization of the inhabitants. As many flats at the estate are rental (about 58% of the flats according to Eurostat, whereas in Poland only 2.5% are rental flats, according to Home Broker 3.5%), which encourages mobility. Accordingly, there is a tendency to separate lessees in terms of their social status at some parts of the estate.

Three slab housing estates situated in Katowice, erected in the Communist times in similar technology, but of entirely different urban scale, were selected for the study. The biggest housing estate: "Tysiąclecie" is currently inhabited by over 22 thousand occupants, "Paderewski" by about 9 thousand, whereas "Zgrzebnik" by only 1500 occupants. All of the three estates are located at such distance from the city centre that enables easy access by public transport, or even on foot. To assess the occupants' opinion on their perception of the quality of the housing conditions at the estates, the survey devised by the research team from Leipzig was used, with slight modifications, and, consequently, utilized for questionnaires addressed to the occupants (596 questionnaires). In addition, open interviews were made

(about 800) with selected occupants and focus meetings with the designers and administrators of the estates, the Police force, developers operating in Katowice and the Municipality authorities.

Each of the studied housing estate was originally administered by one separate housing cooperative, but nowadays there is a trend for changes in their ownership structure, both in terms of the entire estates (see Table 1. Tysiąclecie), with emerging alternative forms of ownership, such as developers' buildings and ownership associations. Furthermore, unlike the discussed German estate, the majority of the flats are privately owned (at "Paderewski": 20% of the flats were transformed to separately owned housing units, the remaining 80% are still administered by the housing cooperative, with only 1.5% of the occupants who preserved the status of lodgers, i.e. the so called: "semi-rental", whereas the remaining occupants have the cooperative ownership right to their flats [5]). The recent study indicated substantial satisfaction of the occupants with their housing conditions – expressed as place attachment (about ¾ of the respondents at "Tysiąclecie" – 68.6% – have a strong or very sense of belonging to the place of their occupancy). The absence of previous monitoring data makes it impossible to state whether there was a decrease in the satisfaction level at the time of the political and economic transition, as observed at Grünau. Nevertheless, as the German transition period had a similar nature in Poland, it may be deduced

Table 1.
Features of the estates selected for the studies

Basic data	Grünau	Tysiąclecie	Paderewski	Zgrzebnik
Construction time	1979 – 1986	1961 – 1982 1988 – 1992 1999 – 2000 2006	1973 – 1981 2000 – 2001	1979 – 2003 2006
Land in hectares	500	188	2.6	11.2
Number of components	8	2	1	1
Originally designed number of occupants	80 – 100 thousand	no data	no data	no data
Current number of occupants (2011)	45 400 (data from 2009)	22 868 registered residents	9306 registered residents	1457 registered residents
Number of housing cooperatives administering the estate	8	2 housing cooperatives and 13 owners' associations	1	1
Number of private owners of entire buildings	8	0	0	0
Number of buildings erected after 1990	1 housing complex (5 buildings) + 5 commercial facilities + 1 swimming pool + 1 youth theatre	7 houses/ flats + 2 commercial pavilions	7 houses/ flats	20 houses/ flats
Number of buildings demolished after 1990	about 80	0	0	0
Number of buildings with reduced floors	about 8	0	0	0

Source: Elaborated by the research team

that the situation was comparable. From the data derived from another research project: PolSenior, the researchers had an opportunity of getting an insight into the evolution of the emotional attitude of seniors inhabiting Katowice “Super-Unit” in the course of their life cycle. From initial state of euphoria evoked by the fact that finally, in the Communist times, after ten or even more years of waiting for the allocation of their own flat they acquired the place of occupancy, through the stage of child-bearing and upbringing, accompanied by dominating insufficiency of floor area and making family life difficult in the long-awaited two or three bedroom flats. Concurrently, under the circumstances of the 1980s crisis and absence or any repair or renovation works, there appeared a sense of dissatisfaction, enhanced after the political and economic transition by the media hype, depicting cooperative housing estates as the essence and relicts of the previous political system. In the last 20 years, thanks to financial support from the National Housing Fund, housing cooperatives have managed to significantly improve the quality of the housing conditions. Furthermore, flats were depopulated (in the case of the investigated housing estates the majority of the flats: 62.1% is nowadays occupied by 1-2 people; 20.5% by 3 residents and only 17.4%

by more than 4 inhabitants) and at present the flats meet the limited spatial needs of seniors and lonely occupants.

3. EXPERT ARCHITECTURAL AND URBAN ANALYSES

The outcome of the above mentioned social studies was confronted with expert evaluation of the quality of the estates made by the research team of architects from the Faculty of Architecture, Silesian University of Technology, who prepared a set of criteria for expert architectural and urban analyses. The criteria include: transport accessibility, urban layout of the estate and its legibility (in accordance with Lynch's principles), way-finding, estate composition in terms of the behavioral needs of the occupants (urban interiors, territoriality, privacy), availability of service infrastructure and greenery, structure of buildings and flats, observance of the Sustainable Development principles and universal design concepts, “design out crime” (design preventing crime commitment). Both Grünau in Leipzig and the discussed estates in Katowice were subjected to the same studies, on the bases of which SWOT analyses were made, entailing strengths, weaknesses, threats and opportunities for their further growth.

Table 2.
SWOT analyses of the selected multi-family housing estates

Grünau	Tysiąclecie	Paderewski	Zgrzebnik
STRENGTHS			
<ul style="list-style-type: none"> • Location – easy access to open green areas; • Very convenient transport connections to the city centre; • Great availability of services; supporting functions and elements of small architecture; • Good social infrastructure; • Liquidation of architectural barriers at the estate – easy access for pedestrians; bicycles; the disabled; • Well-organized urban space of the estate; • Good system of administrative and spatial identification (way finding); • First-rate aesthetics of parts of buildings; • Improved technical quality of several buildings; repairs; renovation and thermal-modernization; Variety of flats and buildings; • Low prices of flats and rents; differentiation of rent prices; • Adjustment of flats and other facilities to the needs of the disabled; • Well-organized administration activities; • Great ideas for the promotion of available flats. 	<ul style="list-style-type: none"> • Location – easy access to a recreational complex; • Very convenient transport connections to the city centre and other parts of the Silesian metropolis; • Great availability of services, supporting functions; • Good social infrastructure (clubs, training courses, sports activities organized by the estate administration); • Well-organized urban space of the estate; • Good system of administrative and spatial identification (way finding) – well marked buildings and streets; • First-rate aesthetics of buildings; • Aesthetic greenery; • Improved technical quality of several buildings, repairs, renovation and thermal-modernization, • Variety of flats and buildings; • Nice view from the upper floors; • Prices of flats lower than those offered by developers; • Relatively low rent rates; • Well-organized administration activity (housing cooperative good management of the housing cooperative) 	<ul style="list-style-type: none"> • Location – vicinity to the city Centre and a recreational complex, vicinity to universities • Convenient transport connections to the city centre and other parts of the Silesian metropolis; • Pedestrian access to multiple urban services; • Great availability of services at the estate and in its vicinity- walking distance to urban services; • Good social infrastructure (clubs, training courses, sports activities organized by the estate administration, • Improved technical quality of several buildings, repairs, renovation and thermal-modernization; • Nice view from the upper storeys; • Prices of flats lower than those offered by developers; • Relatively low rent rates; • Well-organized administration activity (housing cooperative good management of the housing cooperative) 	<ul style="list-style-type: none"> • Location – easy access to a recreational complex; • Very convenient transport connections to the city centre and other parts of the Silesian metropolis ; • Availability of supporting functions (playgrounds, sports grounds and sports pitches; • Good social infrastructure (clubs, training courses, sports activities organized by the estate administration); • Good system of administrative and spatial identification (way finding)- well marked buildings and streets ; • High aesthetics of the greenery – very well managed and looked after, old growth of trees; • Improved technical quality of several buildings, repairs, renovation, and thermal-modernization; • Variety of flats and buildings; Nice view from the upper floors; Prices of flats lower than those offered by developers; Relatively low rent rates; • Well-organized administration activity (housing cooperative good management of the housing cooperative)
WEAKNESSES			
<ul style="list-style-type: none"> • Peripheral location; no possibility of reaching the city centre on-foot; • Excessive size of the estate-big distances, increased by the fact that many buildings were demolished; • Partition of sites around some buildings; • Ad-hoc concepts of the management of sites emptied by demolished buildings; • Excessively grown high and low greenery enhancing the loss of the sense of safety; • Ferro-concrete slab technology of the structure of buildings; • Presence of architectural barriers in flats and buildings; • Low technical quality of flats and buildings; • Privatization and scattering of the ownership structure 	<ul style="list-style-type: none"> • Insufficiency of parking places – hindered internal transport and communication; • Absence of small catering facilities along walking alleys and playgrounds; • Presence of architectural barriers at the estate; • Absence of urban interiors that enable prioritizing of the privacy of space; • Presence of architectural barriers in flats and buildings; • No variety of the quality of flats and the entire houses; • Privatization, scatter of ownership structure, emergence of many owners' associations; • Partitioned estate sites – difficulty in their management. 	<ul style="list-style-type: none"> • Insufficiency of parking places – hindered internal transport and communication; • Ineffectually partitioned urban interiors; • Presence of architectural barriers at the estate; • Poor spatial organization of the estate – unclear separation of specific functions; • Poor legibility of the administrative and spatial identification system; • Ferro-concrete slab technology of the structure of buildings; • Presence of architectural barriers in flats; • No variety of the quality of flats and the entire houses; • Privatization, scatter of ownership structure, emergence of owners' associations. 	<ul style="list-style-type: none"> • Insufficiency of parking places – hindered internal transport and communication; • Insufficient number or total absence of commercial and service facilities; • Presence of architectural barriers at the estate; • Privatization, scatter of ownership structure, emergence of owners' associations and the ensuing difficulties in the management of the estate.

Table 2.
SWOT analyses of the selected multi-family housing estates

Grünau	Tysiąclecie	Paderewski	Zgrzebnik
THREATS			
<ul style="list-style-type: none"> • Decrease in the number of occupants – low • Demand for flats; • Absence of one uniform estate revitalization plan; • Departure of municipal and public institutions from the peripheral sites of the estate; • Reduction of rent rates – ensuing ghetto-sites. 	<ul style="list-style-type: none"> • Decrease in the number of occupants; • Mining damages; • Street noise and stink from the sewage treatment plant; • Destructive legislation – liquidation of housing cooperatives, on-going scatter of ownership; • Partition of sites at the estate – difficulties in administration; • Creation of harmful image of the estate in the public media; • Intensified density of settlements. 	<ul style="list-style-type: none"> • Decrease in the number of occupants; • Mining damages; • Street noise; • Destructive legislation- liquidation of housing cooperatives, on-going scatter of ownership; • Lack of the social acceptance for such type of housing – creation of harmful image in the public media. 	<ul style="list-style-type: none"> • Decrease in the number of occupants; • Mining damages; • Destructive legislation – liquidation of housing cooperatives, on-going scatter of ownership; • Lack of the social acceptance for such type of housing- creation of harmful image in the public media, stigmatization of such big estates as relicts of the Communist times.
OPPORTUNITIES			
<ul style="list-style-type: none"> • Creation of a positive image of the district; • Introduction of new services as a response to the occupants; needs and requirements- participative revitalization process; • Implementation of modern, water and energy-efficient technologies; • Increasing number of seniors and single-households. 	<ul style="list-style-type: none"> • Vicinity to the city centre and other parts of the metropolis; • Universities; • Increasing generation of seniors – demand for small and medium-size flats; • New investments at the estate – introducing better aesthetic and functional quality. 	<ul style="list-style-type: none"> • Vicinity to the city centre and other parts of the metropolis; • Universities; • Increasing generation of seniors – demand for affordable small and medium-size flats; • New investments at the estate – chance for the renewal of worn out urban tissue and improvement of the spatial order. 	<ul style="list-style-type: none"> • Vicinity to the city centre and other parts of the metropolis; • Universities situated in the city; • Increasing generation of seniors – demand for small and medium-size flats; • New investments at the estate – introducing better aesthetic and functional quality.

Source: Elaborated by the research team

The notion of “development” is understood by the researchers team not only as increase in the size of the estate but, first and foremost, continuous improvement of quality and its on-going adjustment to the needs changing in the course of the life cycle of the successive generations. The life cycle of the occupants poses a natural contradiction to the life cycle of the buildings and the urban structure of the estate.

While comparing human life cycle with the life cycle of buildings, it should be emphasized that the estate may last for the longer time, even for several hundred of years at the same site, assuming continual change and reconstruction of its buildings and infrastructure. The durability of the buildings is calculated for about 100 or more years. According to experts’ evaluation, big housing estates erected in the Communist times in pre-fabricated slab technology have a chance of lasting for another 100-150 years. However, their stiff construction imposes a significant limitation to the adjustment to changing human needs in the course of

human life cycle. Several generations inhabit the buildings that are very difficult to reconstruct or alter, while the spatial and infrastructural needs of small children, teenagers, young adolescents, families with children at various ages and, finally, seniors, are fundamentally different. In view of the outcome of the studies, human beings are flexible and easily adjust to certain inconveniences, as those are compensated by other factors that are more important at a given stage of the human life cycle. The important elements that compensate the drawbacks in the quality of housing are the quality of social contacts at the place of occupancy and place attachment.

According to the results of the study (Table 3) the existing estate have several advantages because of which the occupants assess the quality of their housing as high. The advantages include: good infrastructure, greenery, relatively low maintenance costs (reduced costs of central heating after thermal renovation), modernized facilities, good management. The funda-

Table 3.
Evaluation of selected elements of the housing environment

	Overall evaluation of the following estates: Tysiąclecie, Paderewski, Zgrzebnik (scale 1-7; 1-very satisfied, 7-very unsatisfied, data quoted in %)						
	1. (Z)	2	3	4	5	6	7. (N)
Greenery in the surroundings	57.5	23.0	10.3	3.8	2.4	1.2	1.9
City transport means	57.5	25.3	8.0	5.0	1.7	1.2	1.2
Shops in the vicinity	59.4	21.3	8.9	6.3	2.6	0.5	1.0
Health care units	34.3	30.0	18.4	9.0	3.8	2.4	2.0
Playgrounds for children	44.9	25.9	14.4	8.7	2.3	2.0	1.8
Cultural offer / events for adults	17.3	20.1	25.7	16.0	8.1	6.7	6.0
Parking places	10.6	13.2	22.5	18.7	11.8	20.6	12.5

Source: Elaborated by the research team on the grounds of surveys/questionnaires

mental inconveniences for the users of the space of the estates and their facilities are: insufficiency of parking places, structural and non-structural barriers for the disabled existing in the space of the estates but also in higher buildings (where the lifts stop at half-floors), private ownership of flats obstructing efficient management and the undertaking of important strategic decisions, few flats available for rent. Housing cooperatives no more have unlimited power to dispose of the flats for rent, as the new legislation obliges them to put up for sale the flats for their lodgers or their inheritors. On principle, the only economic entity that has unrestricted power to rent previously cooperative flats is a private owner.

The interviews revealed the deficiency of cultural offer and cultural events, especially for the younger generation (interviews with students and young singles).

One of the external opportunities are relatively low prices of flats, sufficient technical quality of buildings, size of flats adequate for people living on low incomes. On the other hand, one of the most serious threats is the reduction of the number of occupants and urban shrinkage of the city of Katowice, where the rate of the depopulation process is about 2000 people/year (which translates into 500-700 households, data derived from Home Broker). According to the predictions of the Polish Statistical Office by 2035 Katowice will depopulate by 12.6% (which means the departure or loss of about 36 thousand inhabitants), as compared with the average national depopulation rate of 5.8%. In consequence, about 10-15 thousand of flats will be abandoned. As expected, first, the vacancies will concern the oldest, most de-capitalized parts of the city, and, secondly, big

housing estates erected in the Communist times. The circumstances may even become worse due to the negative image of such estates, which are considered by the society as ghastly remnants of the previous political and economic system.

Further important threats involve destructive legislation in force, aimed at liquidating housing cooperatives and replacing them by owners' associations, which, in the future, may cause their incapacity of obtaining bank loans to undertake modernization measures. Accordingly, the housing standards will be lowered, as occupants-members of owners' associations may not afford the required repairs and renovations. At "Tysiąclecie" estate there was an attempt to create the owner' association in one of the so called "corn-cob" buildings (25 floors). Following the cost estimation of thermal modernization of the building, the occupants cannot obtain a loan for such costly modernization, calculated for 1 million PLN. On the other hand, the housing cooperative, whose assets consist of the entire estate have not encountered any problems in drawing a bank loan to cover the costs of the investment.

4. CONCLUSION

Studies, presented in this part of the paper, show still good quality of large housing estates, availability of infrastructure, convenient connections to the city center and a fairly high level of satisfaction residents from their place of living. They also point to the importance of social attachment. The biggest threat appears to be unfavorable government policies and legislation. Comprehensive summary of the analyzes will be presented in the second part of the article.

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