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Consideration of Public Opinion as a Condition For Implementation of Reconstruction Projects of Outdated Housing Stock

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ABSTRACT
Creating comfortable living conditions and maintaining proper technical conditions of the housing stock through the reconstruction of obsolete buildings is one of the key tasks of urban planning. Ukraine's lag behind other European countries in this regard can be explained by the imperfections in the legislations, the difficult economic situation, and the peculiarities of the legal status of housing ownership.

To solve this problem a sociological survey in the form of a questionnaire was conducted. Data were analysed using non-parametric Chi-square tests and thematic analysis. The attitude to possible methods of reconstruction of obsolete housing stock depending on age, income level and form housing ownership was analysed. Regardless of the status, the respondents did not support the reconstruction without or without resettlement of residents to a temporary maneuver fund, inclining the relocation to new pre-built housing in the same area. The tendency to keep the area of residence, and not the apartment itself, was supported by the vast majority of respondents, regardless of status.

The results of the study can be useful in preparing proposals for legal, financial, and organizational mechanisms for the implementation of programs and projects for the comprehensive reconstruction of obsolete housing.

Keywords: *Sociological survey, complex reconstruction, outdated housing stock, social climate, Ukraine.*
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INTRODUCTION

"Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable. 11.1. [1]. By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums" is one of the 17 goals of transformation of our world, which are defined by "The 2030 Agenda for Sustainable Development" and aim to reach the proper level of living conditions comfort. Today, according to the UN, more than 1 billion people (23% of the urban population) live in slums, of which more than 589 million live in East and Southeast Asia [2].

Unfortunately, even in Kiev, the capital of a European country, in the 21st century, more than 19% of the population (566.7 thousand people) live in housing, which does not meet the normatively determined level of safety, comfort and cost-effectiveness. Under the current legislation of Ukraine, this category of housing is called "outdated" [3]. According to the General Statistics Office[4], as of 2018, there are 63.5 million m^2 of total housing area (including individual estate) in the city of Kyiv, which is 1,081.7 thousand apartments. At the same time, among the total number of apartments, 1.9% (20,539 apartments) are not provided with cold water supply and 3.3% (35,691 apartments) are not provided with hot water supply. There is no sewage system in 4.3% (46,513 apartments) and 3.9% (42,185 apartments) are not provided with heating (Housing Fund, Kyiv, 2018,[4]). An outdated housing stock requires immediate reconstruction to maintain an appropriate level of living comfort and safety for the population.

Any urban planning decision is a trade-off between what is desired and possible, between the ideas of the urban community about the living comfort and the economic possibilities of society to satisfy them. It was the mass construction of residential buildings of the first industrial series, which was designed to restore the country's housing stock destroyed during the Second World War, that became an illustration of the aforementioned trade-off.

Five-story panel and brick houses with a simplified architectural and planning design became a characteristic feature and created a specific type of the quarters of that period in different countries of the world. Only in Kyivthe volume of housing construction over five years increased 13 times, from 100 thousand m^2 to 1,300 thousand m^2 per year. That level has persisted for more than 20 years [5]. The result of such a large-scale construction was the formation of new

residential areas of Kyiv(Sotsgorod, Voskresenka, Nyvky, Lisovy residential areas, Rusanivka, etc.) and a general doubling of the area and population of Kyiv 1.1 million people in 1959 [6] to 2.1 million people in 1979 [7].

The short-term development of large territories for residential development of a completely new functional-planning and architectural-spatial type created the prerequisites for the formation of a specific urban space with a special socio-demographic structure of the population. A new perception of the image of the city and urban lifestyle formed within residential areas almost completely populated by new, usually non-urban, residents [8, 9].

Such a situation was typical for many countries in Europe. For example, in Germany, the most intensive housing construction of that type took place during 1949-1978. In the first 15 years after the war, at least 5.3 million new apartments were built in West Germany, or 500 thousand apartments a year, and up to 100 thousand apartments were built in East Germany annually [10]. The formed benevolent social climate of new housing estates in Germany, especially East, remained unchanged until the beginning of mass reconstruction and the emergence of new housing forms after 1990 [11].Other authors also testify to the formation of a benevolent social climate in new areas and its preservation until the beginning of mass reconstruction [12, 13].However, a long-term (about thirty years) sociological study of the opinions of residents in cities of East Germany, found that a gradual aging and a decrease in the population, a change in its social and national structure led to a deterioration of the social climate of these residential areas [14].

Awareness of the need to reconstruct the areas developed in the post-war period (the first period of industrial housing construction), already appeared during the 1990s. The 2006 Law of Ukraine "On the Complex Reconstruction of Blocks (Neighbourhoods) of Outdated Housing Stock" [3]envisaged a certain procedure for the complex reconstruction implementation, which was based on the experience of Russia and provided preliminary construction of "start" houses for the resettlement of residents of houses subject to demolition, with subsequent construction of new multi-storey multi-apartment buildings on the vacated territories.

According to the legislation in force at that time, compensation measures were provided for residents of the houses to be demolished – the provision of a new, ready for occupancy ordered apartment in the same block (neighbourhood) with the number of rooms not less than in the demolished house, and of a larger area with a magnification factor of 1.5. At the same time, 100% consent of all residents of the house to be demolished was [3].

Despite the existence of a legislative framework, unfortunately, such a reconstruction was never put into practice. According to experts [15], one of the reasons was the requirement of article 12 of the Law "On Complex Reconstruction ..." on the need to obtain the consent of all residents to relocate to new homes [3].In addition, in recent years, the country's socio-economic conditions have changed dramatically, which requires the formation of a relevant legislative framework and possible financial mechanisms for the reconstruction of outdated housing stock.

The study aims

In order to develop a new version of the Law of Ukraine "On Complex Reconstruction ..." and to avoid a biased attitude of owners / users of residential and non-residential premises in outdated houses, this sociological survey was conducted, which aimed to better understand the attitudes of residents towards possible methods and mechanisms of implementation of a complex reconstruction of an outdated housing stock at a preliminary stage.

Literature review

The category of housing stock, corresponding to the concept of "outdated", in addition to the houses of the first mass series includes several typological groups. So, using the example of the city of Kyiv, there are four of them [16]:

1) *historical type buildings* – construction period: until 1920. This type includes both valuable houses – monuments of cultural heritage, and so-called "background" buildings, which form the urban environment of a certain historical period of the city's development. The volume of this kind of stock is 2.58 million m^2;
2) *barrack type buildings* – the least valuable two-, three-story buildings of the construction period after the Second World War, which were built as temporary housing. The volume is up to 0.28 million m^2;
3) *"stalinka" type buildings ("ordinary" and "'nomenklatura'-intended")* – buildings of the 1930s and 1950s (the period of I. Stalin's governance) with a convenient internal layout of apartments. This kind of stock totals about 0.73 million m^2;
4) *"khrushchevka" type buildings* (5-storey panel and brick buildings, 9-storey panel buildings). These buildings refer to the first period of industrial housing construction (the 1950s-1960s, the period of N. Khrushchev's governance). The volume of the stock is 8.73 million m^2.

Failure to take appropriate measures to reconstruct outdated houses inevitably leads not only to their physical destruction, but also to the threat of creating depressed areas in the city and degradation of the urban environment as a whole [17, 18].

The problem of creating comfortable living conditions and maintaining the proper technical condition of the housing stock of any type is relevant for all countries of the world. Each country has developed its own methods for solving this problem. Analysis of the practice of implementing programs and projects for the modernization or reconstruction of outdated housing stock both in Ukraine [5, 19, 20, 21] and in other countries of the world [22, 23, 24, 25] indicates that among a wide range of urban planning, technical, technological, organizational and economic problems associated with this issue, the social problem also occupies a significant place.

One of the important problems of implementing projects for the reconstruction of outdated housing stock in Ukraine is the availability of private ownership of apartments [26].As of 01.01.2019, in Kyiv, 92.9% of apartments are privately owned, in Ukraine as a whole this figure reaches 95.3% [4]. Unlike Ukraine, in many European countries, half or more residents live in rented housing: in Germany – 57%, in Austria – 43%, in Sweden, Denmark, Czech Republic, Finland – 40% [27].

In Ukraine, only half (53%) of residents of all types of housing express their satisfaction with the quality of living conditions [28].The high percentage of apartments privately owned by the residents makes owners extremely interested in the high-quality technical condition of buildings, and, in recent years, the in parameters cost-effectiveness of house maintenance). Modern sociological studies confirm the urgency of modernizing residential buildings with increasing energy efficiency indicators [29].

The residents of historical type buildings are particularly interested in improving the indicators of cost-effectiveness and energy efficiency of house maintenance. The high level of comfort in these houses due to the expressive architectural characteristics of the house and the convenient location in the planning structure of the city, on the other hand, is levelled out by low energy efficiency and a high level of maintenance costs. That is why, measures for modernizing historical type buildings get high social support from residents [30].

The need to consider the subjective opinion of the community when solving the problem of complex reconstruction of large areas of mass housing construction of the first industrial series was highlighted by numerous authors [14, 31].In Ukraine, the public opinion must be taken into account by law. According to Article 21 of the Law of Ukraine “On the Regulation of Urban Planning Activities” [32], any urban planning documentation at the local level is subject to public discussion. However, such a discussion takes place after the development of the draft urban planning documentation. We believe that a better approach would be to have a legislative and regulatory framework that would take into account the interests of society and minimize the risks of negative attitudes to the developed documentation prior to the development of programs and projects for the complex reconstruction of blocks of outdated housing stock.

A similar approach was used in preparing the directions for reforming the housing and communal services of Ukraine. A sociological study conducted for this purpose showed an extremely negative attitude of residents (almost 70% of respondents) to the quality of housing and communal services in Ukraine. Only one in four thought their quality was satisfactory. And only 5% of respondents rated the quality of services as “good” [33].The study of support for housing and communal services reform among various groups of service users and apartment owners has allowed for the development of a reform program that will satisfy service users as much as possible.

In 2019, the CEDOS Analytical Centre conducted a sociological study of the attitude of citizens to the state and prospects of reforming the State housing policy in Ukraine [28].The study aimed to find out the reasons for the difficulties in securing the right to housing, the conflict between housing as “shelter” and as “an asset”, as well as the attitude of the population towards government policy aimed at stimulating housing ownership in Ukraine and the development of the housing rental sector.

Despite the importance of mass reconstruction of areas of outdated housing stock [34, 35], the issuesof the attitude of the country's population to this problem have not been investigated. There were only separate sociological surveys on the reconstruction or development of local objects, mainly social and engineering-transport infrastructure, in specific settlements [36, 37, 38].This article presents the results of a similar sociological study conducted in Kyiv as part of the development of a city program for the complex reconstruction of blocks of outdated housing stock.

Methodological approach

To investigate the attitudes of people towards the mechanisms of reconstruction, a cross-sectional study utilizing a survey was issued. Predominantly quantitative analysis of these attitudes was conducted based on written responses to

questions. Data were analysed using non-parametric Chi-square as well as thematic analysis for one question. The goal of this study was to inform our understanding of best practices of reconstruction realisation.

Participants:

Given the current population of Kyiv of almost 3 million [39], and with a 95% confidence interval, 733 participants were recruited and have completed the questionnaire. Fifty-nine incomplete responses were submitted, and 1 respondent reported being under 18 years of age, therefore, these responses were not included in subsequent analysis. As such, 674 responses were included in the final analysis.

Out of these, 47 (7%) respondents were between 18 and 25 years old; 464 (68.8%) respondents were between 25 and 45 years old; 118 (17.5%) respondents were between 45 and 60 years old; the remainder 45 (6.7%) were over 60 years old. he majority of respondents (80%) were employed, and the remainder were either retired, studying, or unemployed. In terms of income, 176 (26.1%) respondents reported a net average household income per person to be below UAH 5,000; 251 (37.2%) respondents - to be between UAH 5,000 and 10,000; 169 (25.1%) respondents - to be between UAH 10,000 and 20,000; and the remainder 78 (11.6%) respondents reported a net average household income per person to be over UAH 20,000 for month. The vast majority of respondents (83.8%) were homeowners and residents in their own property and the remainder lived in rented or non-privatized properties.

METHODOLOGY

Prior to the beginning of the questionnaire, participants were informed that a draft "Program of Comprehensive Reconstruction of Quarters (Neighbourhoods) of Obsolete Housing Stock" was being developed in Kyiv and in this context, they were invited to participate in the discussion of certain issues to be included in the program development. Participant responses were collected anonymously and they were informed of their right to withdraw at any point during the study. Upon the provision of informed consent, the questionnaire began.

The study was conducted using an online survey. The questionnaire was created on the basis of the Google Forms platform, was conducted in Ukrainian, and was distributed via Facebook through the researcher's personal page (open access) and in various Facebook groups of the city of Kyiv, particularly those created for the residential areas with predominantly obsolete housing. Participants had the opportunity to respond at a time and pace convenient for them, without restrictions. Data collection ran in the period from October 17 to November 16, 2020.

The questionnaire included an overall 20 questions divided into groups. The survey contained a mixture of multiple-choice questions from a list of suggested answers and multiple-choice checkboxes, as well as an optional open-ended question at the end of the questionnaire.

The first group (questions 1 to 4) addressed the demographic composition and socio-economic living conditions of the respondents. The second group (questions 5 to 13) characterized the location, type, and nature of housing ownership, and the attitude of residents to living conditions (including planning characteristics and the technical conditions of structural elements and utilities in the apartment).

The third section of questions targeted specifically respondent's attitudes towards the reconstruction issues (questions 14 to 19). The possible methods and conditions of reconstruction of obsolete housing were addressed in question 14; the said implementation procedure in question 15; and the attitudes of respondents to the financial mechanisms of the Reconstruction Program and the willingness of residents to pay extra for the opportunity to improve their living conditions in questions 16 and 17. Separately, survey participants were given an opportunity to express their views on painful issues regarding the share of residents who must consent to resettlement (in case of alleged demolition of a house) and temporary relocation to the shunting fund, in case of an overhaul of the house with resettlement (questions 18 and 19). Questions from section three included an "other" answer option, which allowed participants to freely express their views to the multiple choice or checkbox questions. These answers were not used in quantitative analysis, but rather served as a valuable source for qualitative analysis of the data.

Lastly, the fourth section (item 20) of the questionnaire gave participants an opportunity to freely express their comments and suggestions on the development and implementation of the Program for the Reconstruction of Obsolete Housing.

STATISTICAL ANALYSIS AND RESULTS

To investigate the attitudes of residents towards reconstruction of obsolete housing, a series of statistical tests were conducted. Namely, non-parametric Chi-square tests were administered due to the categorical nature of data collected. (Only responses to questions most relevant to the topic of the paper are presented here.)

Home owners and residents of non-privatized housing

Firstly, the differences in attitudes between respondents living in privately owned housing compared to respondents living in non-privatized housing were analysed. A chi-square test of independence was performed to examine the relation between said living status and a series of attitudes (Group 3 questions from the questionnaire).

Overall, only 8.9% of respondents expressed satisfaction with living conditions (see Figure 1). Residents were most concerned about the unsatisfactory condition of engineering networks in houses (57.7%) and inconvenient planning of apartments (47.8%). At the same time, only 0.3% of respondents expressed their dissatisfaction with the area of residence. Only 8.9% of respondents expressed satisfaction with living conditions (see Figure 1). Residents were most concerned about the unsatisfactory condition of engineering networks in houses (57.7%) and inconvenient planning of apartments (47.8%). At the same time, only 0.3% of respondents expressed their dissatisfaction with the area of residence. This indicates the need to investigate further the attitudes towards building reconstruction from the residents.

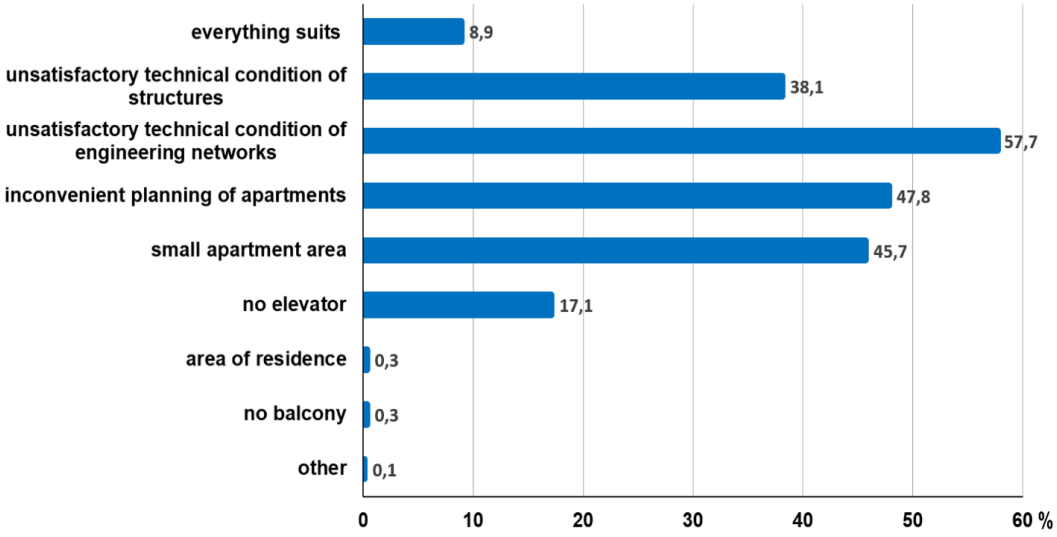

Figure 1: Attitudes of respondents to their living conditions.Source: *own data*

1) What should be done with "khrushchevkas"?

In terms of attitudes towards what should be done with the "*khrushchevka*" and housing status, the relation between these variables was significant at X^2 (3, N = 674) = 7.10, p<.001. Subsequent Bonferroni corrected Chi-square tests revealed that this difference was driven by the fact that those residents living in privately owned housing were significantly more likely X^2 (1, N = 674) = 2.11, p<.001 to believe that "*khrushchevka*" should be completely demolished with subsequent construction on its site of new housing (subject to guarantee of property rights), compared to those who resided in non-privatized housing. No further differences were noted.

2) How should the process of reconstruction of "khrushchevkas" take place?

Similarly, in terms of attitudes towards what should be done with the residents of these "*khrushchevka*" to be demolished and housing status, the relation between these variables was significant at X^2 (5, N = 674) = 1.95, p = .034, and can be seen in Figure 1.

Subsequent Bonferroni corrected Chi-square tests revealed that these differences were driven by significantly more homeowners, compared to residents of non-privatized housing, believed that this demolition should occur with relocation to a previously built new similar housing in the same neighbourhoods with the subsequent demolition of obsolete existing buildings (X^2 (1, N = 674) = 2.56, p<.001). Additionally, home owners, compared to residents of non-privatized housing, were significantly less likely to believe that "*khrushchevka*" residents should be relocated to larger housing following "*khrushchevka*" demolitions (X^2 (1, N = 674) = 0.56, p = .048). Interestingly, however, there was no difference between the numbers of respondents believing that current "*khrushchevka*" residents should be resettled to a temporary housing stock for the period of reconstruction with subsequent return to existing buildings or that renovation should occur with residents still residing there, ought the buildings be renovated and not demolished entirely, regardless of their housing ownership status.

Further, housing ownership did not influence significantly the belief that "khrushchevka" residents should be compensated ought they be relocated to smaller housing, or whether they should pay extra for relocation to bigger

housing. This is somehow unexpected, however could possibly be explained through the poorly phrased question. The question did not specify the type and amount of compensation for changing the size of the apartment or area, which did not allow the respondents to accurately predict and thus evaluate the options provided.

Overall, it is evident that there are differences in beliefs of what should be done to obsolete housing and how current "*khrushchevka*" residents should be treated, depending on whether Kyiv residents are home-owners, or currently residing in non-privatized housing.

The majority of respondents (see *Figure 2*) spoke in favour of the option of staying in their usual area of residence when relocating to alternative housing. This confirms the idea that residents are attached to their area of residence, and not to the apartment as such, as has been discussed by [11, 12, 13]. Respondents' negative attitude, regardless of the form of housing ownership, to the option of relocation for the period of reconstruction to a temporary manoeuvring fund was substantiated in the respondents' open answers. People's concerns were based on the need to change the usual living environment, in particular preschools and secondary schools for children, and possibly the place of work for adults. Including the risk of not returning to the usual area of residence after the repair work.

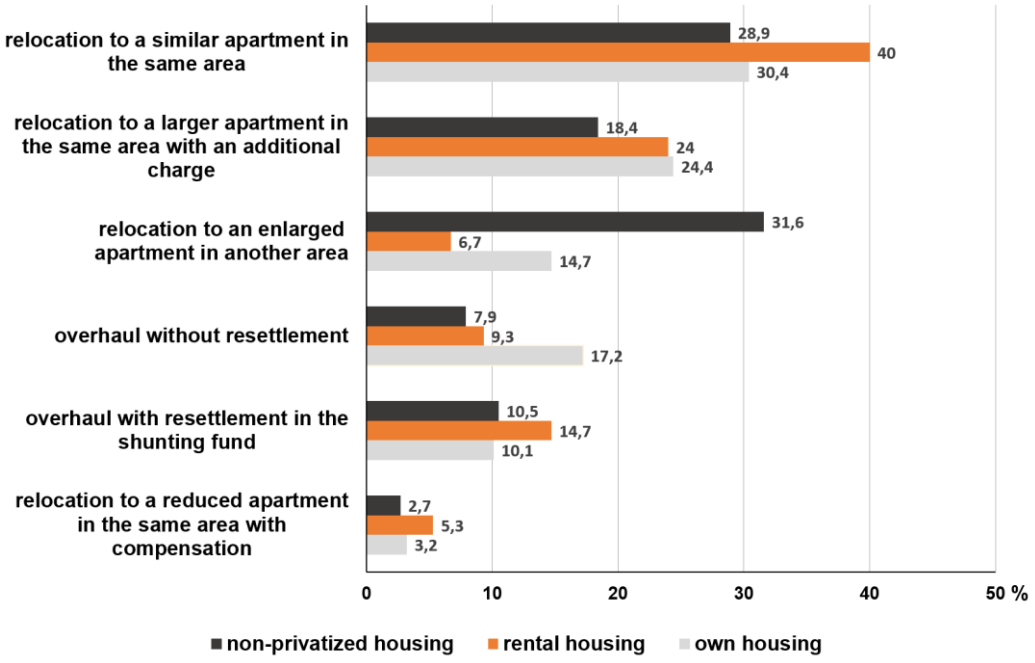

Figure 2: Attitudes towards what should be done with the residents of "khrushchevka" to be demolished and housing status.Source: *own data*

3) How should the reconstruction process be financed?

Despite this, however, no differences were reported between home-owners and residents on non-privatized housing in terms of whether the funding for these reconstruction processes should come from. Equal numbers of residents believed that investor, government and private funds should be used to address these issues, and the majority of residents (regardless of their home-ownership status) believed that a combination of funding methods should be used (62% of respondents). This can be seen in Figure 3 below.

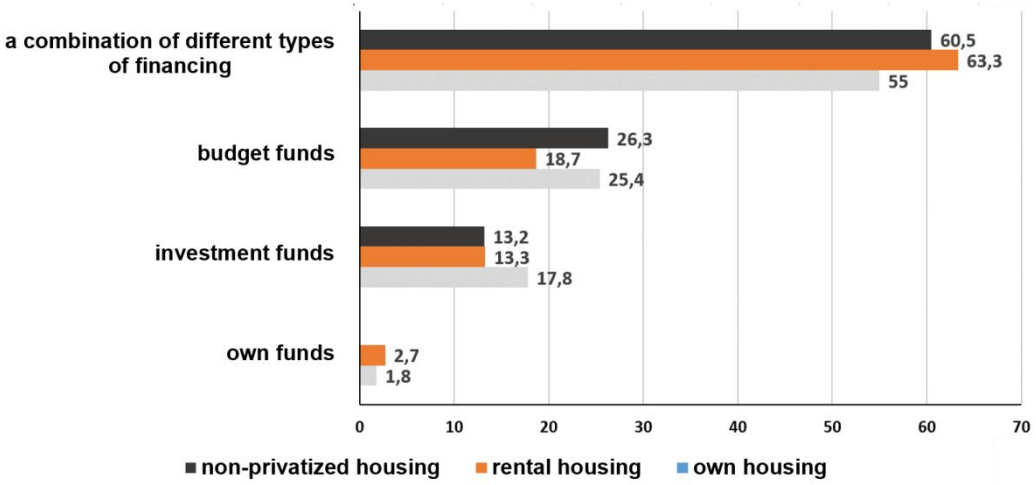

Figure 3: Attitudes towards financing methods and housing status.Source: *own data*

A drawback of this question was that the question formulation did not allow for the possibility of selecting multiple choices of funding options, thus resulting in the majority of respondents selecting the "combination" answer. Had that been possible, this would allow to dissect exactly what combination of funding the residents view as preferred, and thus would provide more accurate information on the priority of funding sources for reconstruction activities.

4) What proportion of apartment residents in the house should agree to its demolition?

The current law "On Comprehensive Reconstruction" [3] stipulates the need for 100% consent of residents to make a decision on major repairs or demolition of an obsolete building. However, the experience of holding public hearings of individual projects shows that some residents use this situation (the need to comment on reconstruction options) to obtain an illegal benefit - the requirement to provide an apartment larger than required by law, area, number of rooms or better floor. At the same time, there are no legal acts on forced eviction in case of non-consent in Ukraine [40].

When analysing participant views on what proportion of current residents of buildings that are considered for demolition should agree to said demolition, no significant differences between home-owners and non-privatized housing residents were found. However, regardless of their home-ownership status, only 21.5% of respondents believed that 100% of residents of housing in question should agree the demolition; 40% (270 respondents) believed that at least 75% of residents have to agree to the demolition, and the rest believed that a lower agreeableness is sufficient. Interestingly, several open responses here were also provided. A thematic analysis of these responses revealed that respondents believed that no agreeableness is needed at all, provided that the city authorities and/or experts conclude that the demolition is necessary, and that relocation support is provided.

This highlights that a 100% consensus, as currently required by law [3], is not a necessary provision and is in fact a possible impediment in the process. To further understand the attitudes, a visual analogue scale could have been used that would allow respondents to provide more granular answers.

What proportion of current residents of the house should agree to relocate to a manoeuvrable housing stock?

No differences between home-owners and residents of non-privatized housing were found in terms of the proportion of residents that must agree to relocate to a manoeuvrable housing stock for it to occur.

5) Residents of obsolete housing and residents of modern buildings

Similarly, to the analysis of responses of home-owners compared to residents of non-privatized housing, Chi-square analysis was conducted to understand how the views of residents of obsolete housing differ from the views of modern-building residents. Here, no significant differences were found on any of the parameters. All residents had comparable attitudes towards what should be done with "*khrushchevka*" and how this process should occur, how these processes should be financed and what proportion of "*khrushchevka*" residents must agree to demolition and to relocation to manoeuvrable housing.

Although it is somewhat unexpected that no differences were found between residents of different housing types, we speculate that this could be attributed to the fact that housing type is not the most significant contributor, but rather the socio-economic status and the personal situation of respondents. This should be addressed in more in-depth analysis in future research.

6) Age differences

When analysing how age impacted respondent's attitudes, Chi-square analysis was also conducted. Age groups of 18 to 25, 25 to 45, 45 to 60 and over 60 years old were analysed.

7) What should be done with "khrushchevkas"?

In terms of attitudes towards what should be done with the "*khrushchevka*" and age, the relation between these variables was significant at X^2 (9, N = 674) = 3.10, p = .017. Subsequent Bonferroni corrected Chi square tests revealed the following patterns. Respondents were more likely to believe that "*khrushchevka*" should be completely demolished with subsequent construction on its site of new housing (subject to guarantee of property rights) if they were aged 18 to 25 compared to if they were aged 25 to 45 (X^2 (1, N = 674) = 1.11, p< .005), 45 to 60 (X^2 (1, N = 674) = 3.06, p< .005), or older than 60 (X^2 (1, N = 674) = 1.11, p< .005). Similarly, respondents aged 25 to 45 were more likely to report this, compared to 45- to 60-year-olds (X^2 (1, N = 674) = 1.19, p = .023), or those older than 60 (X^2 (1, N = 674) = 2.21, p = .015). No further differences in terms of possible ways of handling "*khrushchevka*" were reported. Overall, this finding indicates that when it comes to radical decisions such as demolition and resident re-settlement, younger populations were more likely to accept such outcomes.

8) What proportion of apartment owners in the house should agree to its demolition?

When analysing participant views on what proportion of current residents of buildings that are considered for demolition should agree to said demolition, no significant differences between age groups were found.

9) How should the reconstruction process be financed?

No differences were reported between different age groups in terms of whether the funding for these reconstruction processes should come from.

10) What proportion of current residents of the house should agree to relocate to a manoeuvrable housing stock?

No differences between respondents of different ages were found in terms of the proportion of residents that must agree to relocate to a manoeuvrable housing stock for it to occur.

Overall, when it comes to age differences, the current study found little to no evidence that different age groups may have different perceptions about reconstruction mechanisms of obsolete housing. This is somewhat unexpected, but could possibly be explained through the fact that it is not age, but rather political and social views that defined the perceptions of respondents. Therefore, it is possible that although differences between individuals do exist, they did not manifest in age comparisons, but are rather hidden in political views (this has been demonstrated by Cutler and Bengtson in 1974[41]).

LIMITATIONS AND CONCLUSION

Adhering to the generally accepted goals of sustainable development of settlements and the formation of comfortable living conditions, Ukraine is too late to approach a practical solution to this problem, compared with other countries in Eastern and Western Europe. Prolonged lack of funding for planned major repairs and reconstruction of residential buildings has led to a critical situation. The technical condition of the housing stock and, especially, those types of residential buildings that are classified as obsolete, is close to emergency, and requires immediate intervention. The situation is complicated by the fact that the vast majority of apartments (up to 92%) are privately owned by residents who, due to low incomes and the general crisis in the economy, are not able to solve this problem on their own. The legal framework created in Ukraine on this issue is characterized by imperfections and needs to be reformed.

The conducted sociological research was an integral part of the preparation of the "Program for the Complex Reconstruction of Blocks (Neighbourhoods) of Outdated Housing Stock in the City of Kyiv" and aimed at the previous stage to take into account the opinion of the population on urban, legal and economic mechanisms of the Program [16, 42].

The study confirmed the concern about the condition of obsolete residential buildings and the readiness of the population to implement the Program. Only 8.9% of respondents were satisfied with living conditions, and from 45.7% to 57.7% expressed concern about the technical condition of structural elements, utilities and planning features of apartments. Almost all respondents (except 0.3%) positively perceived the usual area of residence and did not express a tendency to change it. Trying to preserve the area of residence, respondents, regardless of the form of housing ownership, chose relocation options to similar apartments in the same area (72,8%) and did not agree to move to another area, even if the apartment is larger.

The study revealed significant differences in the choice of possible reconstruction options depending on the form of ownership of housing (apartment owners were in favour of complete demolition with subsequent construction of new buildings on this site, provided that property rights are guaranteed). Regardless of the status of the property, the respondents did not support the options of carrying out reconstruction measures with relocation to temporary housing for the period of reconstruction, or carrying out major repairs and resettlement of residents.

Only 21.8% of respondents supported the mandatory 100% consent of residents in deciding to demolish an obsolete house.

The current study presented a series of limitations which likely have contributed to the lack of differences in responses between certain groups. First of all, social desirability and response bias may have been a significant factor in this study. Since the study was distributed through social networks and conducted online and completely anonymously, it is possible that respondents provided misleading answers to certain questions.

Moreover, during the course of the questionnaire running, it was noted that certain questions may have had misleading wording or wording that may have been misunderstood by participants. For instance, question 15 which addressed the method by which the relocation could occur, did not explain what "relocation" means (for instance, is it fully sponsored and arranged by the government, or must the residents relocate at their own time and expense). As such, it is possible that the question was answered differently by different groups or individuals, due to differing interpretations. Such poor construct validity could explain why no differences were found in the responses of various groups to question 15, for example.

Finally, the abundance of answers to the last, open question, indicated that the study has scope for deeper qualitative analysis of the issues at hand. In the present questionnaire, a quantitative assessment was conducted to understand attitudes and their distributions. However, several respondents expressed views not covered by the questionnaire in the open questions. It is clear that future studies could benefit from conducting in-depth qualitative assessments to better understand the social and psychological mechanisms that underlie people's attitudes towards the reconstruction of obsolete housing and accompanying moving processes. For instance, concepts such as place attachment, personal circumstance (including SES and family status, as well as political and cultural views should be investigated in more depth.

Nonetheless, the results of the study can be useful for preparing proposals for adjusting the legal framework on this issue, selecting possible options for implementing programs and projects for the reconstruction of obsolete funds, the formation of effective financial and organizational mechanisms.

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