SURVEY-BASED RESEARCH AS A SCIENTIFIC ANSWER TO THE DEFICIENCY OF QUALITATIVE DATA REGARDING MICRO-URBAN LEVEL OF NEW MULTI-FAMILY HOUSING IN SERBIA

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Abstract. In socialist era, multi-family housing played an important role in creating decent life for proletariat as the main social class in cities. Mass-construction of this type of housing put forward the creation and implementation of standards in housing, which consequently formed a specific urban fabric in socialist cities. Socialist Yugoslavia was a bit unique example due to decentralization during its last decades. This enabled the existence of regional and local housing standards. The differentiation in space was reflected thereby in every local unit, with locally-set relations between buildings and their plots as well as neighbour street and buildings. Therefore, different micro-urban characteristics appeared in housing. This situation was just intensified with the dissolution of Yugoslavia, leaving a lot of freedom to local level to do its own housing “policy”. These local “policies” have been significantly influenced by growing market economy and private incentive in housing. Multi-family housing has been favourable type of housing construction for new private investors due to the best exploitation of all related resources. Therefore, it has become a dominant type of housing construction. In the case of micro-urban conditions, this approach has triggered the entire urban development and has sparked public opinion in some extreme cases.

Nevertheless, the relevant legislative and statistical data adopted and published by official institutions, such as competent Ministries and Statistical Office of the Republic of Serbia, is scarce, inaccurate and scientifically limited. Thus, the aim of this research is to find solutions to overcome this gap by using the knowledge and experience of local experts in urbanism. Taking in account that this research is based on their opinions regarding micro-urban conditions in housing, selected methodology is a survey. It was conducted among the participants of the Summer school of urbanism in Kragujevac, Serbia, in May 14-15 2015. Their professional opinion is analyzed to form recommendations and guidelines for the improvement of current state in housing planning and development in Serbia.

Key words: Multi-family housing, micro-urbanism, Serbia, survey, experts

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1. INTRODUCTION

Housing was one of the main ‘pillars’ of ideological agenda in the former socialist societies in Europe (Pickvance, 2002). Nevertheless, after the fall of socialism in Europe (1989-1991), the position of housing has been noticeably changed, following the reshaping of political, economic and social elements of the previous socialist systems (Vujović and Petrović, 2004; Stanilov, 2007). Knowing that post-socialist transformation has had profound influence on all segments of life, the formation of coherent strategy, long-term policy and competent institutions in housing reform has been prevented (Chapman and Murie, 1996; Stephens et al, 2012). As a result, unique spatial features have emerged in housing during post-socialist period (Vranic et al, 2016).

The uniqueness of post-socialist housing has been in focus of scientific cycles since the fall of socialism. Furthermore, this wide topic has had many different subtopics (Petrović, 2004; Vujović and Petrović, 2005). The social and economic aspects of post-socialist housing are, thereby, prevalent in scientific research. They mainly consider general housing issues on a large scale, such as social status of housing, segregation and gentrification, tenant rights, ownership or rents. These ‘macro-urban’ characteristics of post-socialist housing are hereby scientifically well-presented.

On the contrary, the research of physical characteristics of the housing in urban fabric, such as the relations between housing buildings and their plots, nearby structures and streets, is relatively rare. All mentioned characteristics belong to ‘micro-urban’ aspect of housing. If it exits, this research is usually related to some very specific situations and extremes, such as a radical addition of extra stories or lofts on top of older buildings (Vranic et al, 2015). One of probable reasons for the lack of this research is certainly different ‘traditions’ regarding housing history and local context through pretty spacious post-socialist region in Central, Eastern and South-eastern Europe (Hamilton et al, 2005; Tsenkova, 2005). However, some commonalities in housing, developed during socialist period, are noticeable. They can be named as an ‘East European Housing Model’ (Tosics and Hegedus, 1996; Mandić, 2010). This model has been a base for diverse trajectories in housing transformation throughout the region during post-socialist period (Tsenkova, 2005; Hirt and Stanilov, 2014). They emerged in time when state control under housing sector was withdrawn, enabling spatial decentralisation (Iliev and Yuksel, 2004; Glock et al, 2007) and leaving a lot of freedom local level to trace its own ‘approach’ to housing issues (Hamilton et al, 2005). Furthermore, outdated and reactive urban policies, widespread in weak post-socialist states (Petrović, 2009), have also supported the differentiation of housing at ‘micro-urban’ tier. Being in this state, they have actually re-popularized the links with local context. Therefore, it is understandable that the overview of physical characteristics of housing requires a complex and wide research of local conditions and features (Milić, 2006).

In the case of Serbia, post-socialist influence is especially noticeable in housing construction, as ‘the most dynamic indicator of housing-market performance’ (Tsenkova, 2005, p. 37). Moreover, housing construction has been proved as one of the most profitable activities in Serbian economy (Mojović and Žerjav, 2011). In almost all cases, domestic housing construction for market is multi-family residential projects in the form of multi-storey buildings. This housing type maximises built capacities and, thereby, profit, which is a crucial factor in the market-driven development of housing in Serbia (Mojović, 2008). This phenomenon is also typical for some other post-socialist countries in Europe, such as Russia.
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(Pickvance, 2002). Some other well-known market-oriented housing types, such as row-houses with lower density and smaller capacities, have been understandably omitted by private investors in Serbia due to lower expected profit (Ralević et al., 2014).

New multi-family residential buildings are very common in Serbia today. For example, those buildings made almost ½ of the entire housing stock built in two decades of post-socialist period (1991-2011) (Jovanović Popović et al., 2013). In accordance to this ratio and their dimensions, those buildings have become dominant spatial elements in cities and towns by their physical and visual appearance.

The dominance of multi-family residential buildings in urban areas in the conditions without clear housing policy (Petovar, 2003; Antonić, 2015) and with weak planning governance (Hirt and Stanilov, 2014), have doubtlessly challenged urban development at ‘micro-urban level’. Some functional characteristics, such as an increase of the level of urbanity, can be easily described as positive. In contrast, their physical side is more questionable (Fig. 1 and 2).

Fig. 1 and 2 Many areas in Belgrade are a good example of market-led ultra-maximization of the capacities of building plot with observable negative consequences on open public space and living conditions (Author: B. Antonić)

Despite presented figures, the data regarding this issue is scarce, often incompatible and scientifically limited. This is the case with legislation, statistical information and related scientific research. For instance, architectural and technologic aspects are arranged in the legislative act concerning standards and norms for the design of housing buildings and units. “Micro-urban” elements are indirectly treated in some of them, through the standards for natural lightening (MCTI, 2012-15). However, this is just a ‘tip of the iceberg’.

Similar situation can be noticed in official statistics - Statistical data from the last census (2011) collected just the data relating to very limited housing typology (single- vs. multi-family housing) (SORS, 2013). Thus, the main problem is how to study current situation if the deficiency of scientifically valuable resources is evident.

Therefore, the proposed research aims to find solutions to overcome this gap between the dominance of new multi-family housing in Serbian reality and the general deficiency of adequate statistical and research data. Accordingly, the paper offers a new approach, using the methodology of a survey to achieve the expected aim. This methodology is suitable for the research where human opinion is important. In line with it, the survey was conducted among competent Serbian experts, to acquire results from their professional knowledge and
experience in this topic. As a final contribution of the paper, these results are used to form recommendations and guidelines for the improvement of the ‘micro-planning’ of housing in Serbia.

2. CURRENT DATA REGARDING HOUSING IN SERBIA

Current data about housing in Serbia as well as in other countries in South-Eastern Europe show that the number of dwellings per 1,000 inhabitants is noticeably smaller than in the rest of Europe (Iliev and Yuksel, 2004). In this situation, the tendency to construct multi-family housing is not unexpected. The new buildings¹ of this type make more than 1/6 of the entire stock of this type of housing in Serbia today - the cumulative area of the dwellings built in the period 1991-2011 is more than 23,000,000 m² (Jovanović Popović et al, 2013). All presented data means that new multi-family housing Serbia will play a significant role in future urban development at both national and local level.

Despite these trends, adequate statistical data to figure out physical relation between new housing and nearest urban environment in Serbia are scarce and confusing. Generally, data regarding architectural parameters² is more available. The main statistical data related to newer multi-family housing at national level is available from the latest national census in 2011. It defines the difference between single- and multi-family residential buildings by the number of dwellings – more than two dwellings in a building is considered as multi-family housing (SORS, 2013). The dwellings in multi-family residential buildings make 31.7% of all dwelling in the country, but their share is much bigger in the urban settlements of Belgrade region (78.4%) and in the City of Novi Sad (75.1%). New multi-family housing (1991-2011) is even more represented - related dwellings make 44.8% of the entire new housing stock by the numbers of units. Their share is also significant in the entire multi-family housing - they represent 18.3% by official statistics, with the top numbers in the most urbanized territorial units: Southern Bačka district and Belgrade region – 31.5% and 24.5%, respectively (SORS, 2013).

Aside the presented statistical data, there is no information about urban aspect of (new) housing. Even basic housing typology in not presented, although some of these parameters are included in the census questionnaire:

![Image of official questionnaire from the census 2011]

Fig. 3 The part of an official questionnaire from the census 2011 which treats the issue of housing typology (Source: SORS, 2013)

¹ New buildings are those built since the fall of socialism in Yugoslavia (1991-).
² Size of dwelling, number of rooms, position of dwelling in the building, building materials, installations, etc.
Scientific research on the physical aspects of (new) multi-family housing is also strongly related to architectural and technological side. However, some valuable information can be obtained. The most prolific international research, presented through the publication ‘Atlas of Multifamily Housing in Serbia’ recognises four types of multi-family residential buildings (Jovanović Popović et al, 2013b). This is different than in the typology given in the national census with 8 possible options. The distribution of four proposed types for the last analysed period (1991-2012) is very interesting, because one type did not appear during this period:
- free-standing / fully detached buildings without dominant dimension - 44.1%,
- Free-standing and high-rise buildings with 10+ floors – ‘Towers’ (Serb. Soliter or Oblakoder) – 0.0%,
- free standing buildings with multiple cores and separate entrances (Serb. lamella) – 21.7%, and
- Buildings in raw – 34.2%.
Furthermore, there is the data about the number of floors per building, floor plan complexity, and total floor area. Although these parameters are profoundly analysed through architectural and technological aspect, this analysis omit their position in local urban context. As a result, this certainly qualitative research has limited impact on the understanding of the ‘micro-urban’ characteristics of new multi-family housing in Serbia.

3. METHODOLOGY: SURVEY AND QUESTIONNAIRE

In accordance with the aim, scientific methodology in the research is based on a survey and an accompanying questionnaire. The questionnaire starts with 4 introductory questions. They refer to the professional profile of respondents: their professional field, character of professional work, jurisdiction and ownership of their institutions/organisations. Then, the main body of questionnaire consists of 8 ‘major’ questions, dedicated for the analysis of ‘micro-urban’ elements in new multi-family housing in Serbia. 7 of them are closed-ended questions, where the respondents can chose only one choice among of 4 or 5 given options. The question No 2 is different; the respondents must sort all given choices from the most suitable option to the least suitable one.

Both survey and questionnaire are designed for the experts in the field of urbanism and related professional disciplines. Therefore, the survey was conducted at a nationally known conference with the high attendance of local experts. It was Summer school of urbanism in Kragujevac, Serbia, in May 14-15 2015. In total, 114 experts from all parts of Serbia participated in the survey. The profile of the respondents was formed by 4 introductory questions. Its main features:
- Professional field: 92% of the respondents belong to urbanism (urban planning + urban design). Others are from related professional disciplines (transport, construction, cadastre, geology, etc);
- Professional competence: 82% of the respondents are mainly employed in the creation of the main acts in urbanism and spatial planning (urban and spatial plans and urban-design projects), as well as other spatially-based documents (e.g., strategic documents);
Fig. 4 The English translation of used questionnaire in the research

- Ownership status of their organisations: Public sector is prevalent. 76% of the respondents work in public institutions. 23% of them are in private sector and just one is an employee in non-governmental organisation.
- Jurisdiction of their organisations: Relative majority or 47% of the respondents work at local-level jurisdiction. Other respondents work in higher jurisdictions: district-, national- and regional-level jurisdictions are represented with the share of 29%, 13%, and 7%, respectively.

4. RESULTS

The first two questions in the questionnaire refer to the typology of new multi-family housing buildings by general physical characteristics. The typology is not the same as that one presented in the aforementioned scientific research. This typology is customized to ‘micro-urban’ characteristics and they do not consider some architectural elements that
are crucial for exterior organisation\(^3\) (Fig. 5). Therefore, this typology offers just two types of detached residential buildings, depending on the verticality or horizontality of their shape (a ‘tower’ or ‘lamella’ buildings). However the type of raw-buildings exists in the same character in both typologies.

**Fig. 5** Three types of multi-family residential buildings given as prime options in the first two questions – row-building in block perimeter and detached buildings in the form of ‘tower’ and corridor building (Author: B. Antonić)

The first of the questions (fig. 6) is structured as a one-choice question. The distribution of obtained answers made pretty even distribution among three major choices, with the small preference of the type of row-building along the perimeter of an urban block (41%). This choice was expected, because it maximizes the utilization of the building plot.

![Pie chart showing distribution of preferred types of new housing buildings](image)

**Fig. 6** The distribution of preferred physical types of new multi-family housing buildings by one choice (Author: B. Antonić)

The possibility to sort given proposals instead to opt for just one of them is the main difference between the first two questions. There is also a novelty in the second question – a type of urban villa, with the specific urban characteristics related to their luxurious elements, is added. Thus, the respondents sorted 5 proposals in this question; from the most frequent type of to the least frequent one (fig. 7). Four of them are concretely named and the last proposal covers the other and mixed types. Here, two types have been proven as the most dominant in Serbian urban areas: row-building in block perimeter and detached building in the form of corridor building along accompanying plot. Similarly to previous, these two

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\(^3\) For example, number of entrances or number of flats per floor.
types maximize the utilization and the coverage of the built plot. Moreover, these results concur with the aforementioned scientific research, despite different consideration (architectural and ‘micro-urban’).

![Chart](image)

**Fig. 7** The distribution of preferred physical types of new multi-family housing buildings by the sorting of given choices (Author: B. Antonić)

The next question is connected to the customization of the size and dimensions of new multi-family housing buildings to existing neighbour buildings. This issue seems to be very evident in the case of Serbian cities (fig. 8 and 9). The obtained results follow everyday observations. Almost half of respondents (46%) selected the choice which support the statement that new building usually omit, i.e. go beyond the size and dimensions of existing neighbour buildings (fig. 10). With the group which strongly support this stance (20%), it is clear that 2/3 of respondents think that new housing is not customized to existing urban fabric.

![Image](image)

**Fig. 8 and 9** The appearance of new typology in older residential areas (Source: B. Antonić)

This challenge about the maximization of the capacities, identified in the previous question, is further elaborated in the next question, where the issue of the coverage of the plot with new multi-family housing buildings is concerned (fig. 11). Expected problem with overbuilt plots is highlighted by the question. The results prove this expectation – more than 90% of respondents agreed that the plots with new housing are usually or generally overbuilt. It seems that problem with exaggerated construction in the last two questions is more evident in the case of surface than in volume.
However both questions have not touched the relations between new multi-family housing buildings and accompanied open public space. The next question asks about these relations (fig. 12). Concretely, it treats the relation between the height of the buildings and the width of the streets which are in front of them. The majority of respondents deemed that these buildings were too high for the width of accompanying streets, in general (36%) or in the most of cases (27%). This situation certainly makes a pressure to numerous features, such as street parking, street greening, or natural lightening of both street and neighbour buildings.

The sixth question (fig. 13) is created as an ‘assemblage’ for three previous questions, because it included an understanding how spatial/physical relations and features in the analysed housing influence the quality of human life. Thus, it considers is the level of privacy of the first neighbours of new multi-family housing threatened by its building. The opinion of respondents is clear - new buildings generally (34%) or usually (47%) reduce the level of privacy to be observed as threatened.

The last two questions are connected to the possible examples of several newly-built buildings of multi-family housing on one plot. The seventh question (fig. 14) refers to the

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4 Streets are introduced and named in the question, because they are the most often type of open public space.
general appearance and the frequency of such grouping. The results present obvious division between respondents. The first half of them thinks that they are rare or non-existent in the area of their jurisdiction; the second half has an opposite opinion. Perhaps the regional differences of urban fabric in Serbian cities and towns and hereby caused different patterns of sizes and dimensions of building plots can be the explanation.

Regional differences perhaps are also crucial for the last/eighth question, which applies to the typology of the mentioned grouping (fig. 15). The majority in respondents’ group (58%) did not recognize any dominant typology or pattern of the grouping of newly-built multi-family housing on one plot. The concrete types, such as grouping in row along the longer side of the plot or grouping in a parallel way, were in minority, with 22% and 14% supports, respectively.

**Fig. 14 and 15** Grouping several newly-built multi-family housing buildings on one plot – frequency (left) and typology (right)

5. CONCLUSIONS

The results of the research present that urbanism-related professionals have usually negative attitude to newer trends in newly-built multi-family housing in Serbia at “micro-urban” level. By their opinion, it is obvious that new multi-family housing makes a huge pressure to all elements of existing urban fabric in immediate environment. New residential buildings are the most often problem for themselves and their inhabitants, owing to the overbuilding of their plot (91% answers). Then, they are a problem for neighbour buildings (81%) and streets (63%).

The reasons for this situation are certainly new economic circumstances in Serbia that are similar to the situation in many other post-socialist countries in Europe. The influence of liberal capitalist model and free market has produced less regulation (Stanilov, 2009), which consequently has left much freedom for private investors in the sector of housing construction. Therefore, they tend to maximize the available capacities of building plots, causing evident problems relating to the coverage of plot, the proximity of new building to its neighbours, and the height ratios between new building and neighbour structures. The most often used type of multi-family housing by this research is a very rational type of raw buildings along building perimeter with 41% of the respondents’ option. This type is also indirectly supported by the results about the frequency and the typology of buildings’ grouping.

The status and the possibilities of urban planning in Serbia have been linked with these problems in housing sector. Without improvement in the future, ongoing tendencies will probably lead to bigger obstacles for urban development in the long term. In order to
upgrade the presented situation in the future, special standards and norms for housing at urban level should be introduced and implemented through urban legislation as well as urban plans and projects. They must ‘tighten’ adequate rules and provisions for housing construction. Furthermore, urban planning should also use some ‘soft’ measures, such as the creation of guide documents, the education of future tenants, and the promotion of the best urban practice of newly-built multi-family housing. A special accent should be given to following measures:

- The mentioned norms and standards should be particularly introduced in the case of the most triggering issues, such as housing in central urban areas or contact zones between single and family housing;
- All enacted standards and norms should be linked with statistic data. This link must be mutual. On the one side, currently inadequate statistical data need further improvement, better accuracy and the customization with real-life situations. On the other side, new standards and norms in housing should be at least in part developed on current statistical organization to enable the continuity of statistical practice in housing;
- Besides the relation to the dimensions and the shape of building plot, existing in the current legislation in Serbia, housing standards should also be sensitive to local and regional context - to include the existing urban parameters. For example, the volume of new housing buildings should be customised to existing micro-urban context (streets in the front of the buildings, neighbour buildings);
- If the previous case is different, i.e. the dimensions and the volume of new housing buildings go beyond of those elements in existing context, the clarification of such approach should be professionally elaborated through competent urban plans and designs projects (the aspiration to change existing typology, to increase urbanity, etc.);
- If new regulation tends to overly increase of the use of building plots, the limits should be introduced as obligatory standards. These limits must be supported by well-defined minimal living standards, such as the minimal ratio between height of building and the width of related street or the minimal percentage of green areas per building plot;
- The issue relating of the grouping of several newly-built buildings of multi-family housing on one plot seems to be insufficiently covered by adequate legislation and regulation. The prospective norms and standards need to better define possible typology in such projects in the case of both buildings and open spaces on the plot.

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5 Although these standards are already defined in some urban plans in Serbia, they are optional and related to the “best practice”. For the future improvements in the planning of housing, it is necessary to enact new rules regarding minimal standards, which will be obligatory for the entire system of planning.
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ISTRAŽIVANJE PUTEUM UPITNIKA KAO NAUČNI ODGOVOR NA NEDOSTATAK KVALITETNIH PODATAKA O MIKRO-URBANISTIČKOM NIVOU NOVOG ViŠEPORODIČNOG STANOVANJA U SRBIJI

U doba socijalizma, višeporodično stanovanje igralo je značajnu ulogu u stvaranju pristojnih uslova života za proletarijat kao glavni društveni stalež u gradovima. Masovna izgradnja ovog vida stanovanja je nametnula pravljenje i sprovođenje standarda u stanovanju, što je za posledicu obrazovalo specifično urbano tkivo u socijalističkim gradovima. Socijalistička Jugoslavija je delom jedinstven slučaj zbog decentralizacije tokom njenih poslednjih decenija. Ovo je omogućilo regionalne i lokalne standarde u stanovanju. Raznolikost u prostoru se stoga očitovala u svakoj lokalnoj jedinici, sa lokalnom uređenim odnosima između zgrada i njihovih parcela kao i prema susednim ulicama i zgradama. Na osnovu toga u stanovanju su se pojavile različite mikro-urbanističke odlike.

Ovakvo stanje samo je pojačano raspadom Jugoslavije, ostavljaći mnogo slobode lokalnom nivou da uredi svoju stambenu „politiku”. Ove lokalne „politike” su do sada bile pod značajnim uticajem narastajuće trešnje privrede i privatnih inicijativa u stanovanju. Višeporodično stanovanje je bilo pogodan vid stanogradnje za nove privatne investitore, uzimajući u obzir najbolje iskorišćenje sa tim povezanih resursa. Na osnovu toga, ono je postalo preovlađujući vid stanogradnje. U slučaju mikro-urbanističkih uslova, ovaj pristup je postao izraz za celokupan urbanizaciju i ustalisao je javno mnjenje u pojedinim, ekstremnim slučajevima.


Ključne reči: Višeporodično stanovanje, mikro-urbanizam, Srbija, upitnik, stručnjaci