

A socially resilient urban transition? The contested landscapes of apartment building extensions in two post-communist cities ¹

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Do-it-yourself urbanism: vertical building extensions in the urban landscapes of Skopje and Tbilisi

Abstract

The architectural and social landscapes of many post-socialist cities have been transformed by an emergent urban phenomenon: the construction of vertical building extensions (VBEs) on the balconies and façades of multi-storey residential buildings. While such structures are often of a makeshift, improvised character, many of them possess reinforced concrete frame constructions that often parallel the 'host' building in terms of size and function. This paper examines the social and spatial underpinnings of such extensions, with the aid of a field study based in Skopje and Tbilisi – the capitals of, respectively, Macedonia and Georgia. We highlight the embeddedness of this phenomenon in a set of policy decisions and economic practices specific to the post-socialist period, as well as their complex implications for the present and future use of urban space. One of our key arguments is that VBEs 'spatialize' coping strategies in post socialism, embodying a kind of 'DIY urbanism' that has deeply transformed the conduct of everyday life in the city.

Introduction

The past two decades have seen a profusion of academic research into the multiple socio-cultural, economic and political transformations affecting European urban areas in the former socialist bloc. However, the geographical spread of such studies is relatively uneven; while cities the northern part of the region (Central Europe, the Baltics and Russia) have attracted a significant amount of expert attention, comparatively little has been written about its more southern areas (the Balkans, Ukraine, the Caucasus). Moreover, the majority of work that has been undertaken to date has tended to concentrate on macro-scale patterns of restructuring: migration trends, processes of segregation, commodification and neighbourhood change, economic investment dynamics, as well as the changing functions of city territories (for a recent overview, see, for example, Borén and Gentile, 2007; Stanilov, 2007 or Tsenkova, 2006). There has been less research on the role of the built environment in the social reproduction of everyday life, especially with respect to the articulation of 'alternative' economic and cultural practices. In its entirety, the existence of such lacunae in the academic literature implies that urban studies continue to be faced with the challenging task of documenting and analysing built developments that affect the lived experiences of post-socialist cities across Eastern and Central Europe (ECE), and especially the Balkans and the Caucasus.

One emergent urban phenomenon that has been particularly neglected as a result of this dual knowledge gap is the growing expansion of vertical building extensions (VBEs) on the facades of apartment blocks in the more 'southern' ECE cities. The almost complete lack of research in this field has transpired despite the apparent ubiquity of such developments: even the briefest of journeys to the housing estates in the larger post-socialist cities of the Balkans and Caucasus immediately alerts the attention of the visitor to the frequent, sometimes universal, presence of VBEs in all shapes and sizes. Yet it remains unclear how such built developments have transformed the social and economic articulations of everyday life in the city, especially with respect to urban dwellers' mobility needs and desires. The fact that

many of them incorporate solid frame constructions that often parallel the ‘host’ building in terms of size and function implies that they are likely to be present in the urban landscape for a long time, thus influencing its development in multiple ways. This aspect of the issue, combined with the lack of a relevant policy framework or even any serious public awareness about it, underscores the need for further research in the area.

Therefore, this paper aims to provide an initial look at the multi-faceted urban geographies of external residential extensions in post-socialist cities, with the aid of a field study based in Skopje and Tbilisi: the capitals of, respectively, Macedonia and Georgia. Our primary objective is to investigate the social, economic and institutional forces that drive this phenomenon in post-socialist cities, while scrutinising its impacts on the use and development of urban space. The paper thus examines the extent and type of such structures, the socio-economic needs that they address (especially with respect to the underlying economic relations of production and consumption), their physical effects on the appearance and function of urban micro-territories, the legal and institutional framework that allows them to be built and created, as well as their broader influence on the neighbourhoods that they are parts of.

Though by no means comprehensive, our analysis aims to open up the path for a broader consideration of the oft-neglected material manifestations of alternative economic practices in post-socialism. Thus, one of the paper’s key arguments is that external residential extensions in fact ‘spatialize’ household coping strategies in post socialism, almost embodying a kind of ‘DIY urbanism’ that has important implications for the conduct of everyday life in the city, as well as its economic, social and cultural dimensions. We would also like to challenge the perception that such developments are mainly prevalent among low-income social strata and urban neighbourhoods – thus representing a new type of ‘vertical slum’ – as our evidence indicates a more mixed picture: the phenomenon tends to be present in better-off working-class and many middle-class neighbourhoods, while household interviews have shown that it expresses the relative affluence of its dwellers. The article also examines the temporal implications of the issue, which, as we have found, is not entirely a post-socialist development: in Georgia, it emerged during the late-Soviet period, as a result of a concerted policy effort by the state.

VBEs in post-socialist cities: the temporal and spatial context

Understanding the reasons for emergence of the VBEs in the ‘southern’ post-socialist states requires a closer examination of the particular structural characteristics of the socio-economic context within which they have developed and remain situated. The origin and evolution of the phenomenon can be understood as a result of the interactions between the overlapping socialist legacies of housing shortage (Szelényi, 1996) and low residential mobility (French, 1995; Gachechiladze and Salukvadze, 2003), on the one hand, and country-specific institutional and socio-economic paths of transformation since the late 1980s, on the other. Within the latter context, the relatively incomplete and late urbanization of many of the southern post-socialist states – including Macedonia and Georgia alike – has strongly influenced the post-socialist path dependencies that have shaped these countries’ urban areas.

Although most of Europe suffered from a housing shortage in the immediate post-war years, its degree and extent varied both across and within countries (see Hall, 2000). The East-Central European (ECE), and especially Soviet, case was particularly acute: war destruction simply added a new dimension to the severe shortages rooted in the Stalinist policy of forcing industrialization on an urban system that was by no means able to absorb the population expansion that it implied, effectively 'economizing on urbanization' (Ofer, 1976; Zaslavsky, 1997). As a result of these policies, both ECE and Soviet cities faced persistent housing shortages throughout the years of Communist rule; in the latter group of countries, such difficulties were further exacerbated by the prioritization of heavy industry, which implied that the nationalized housing stock not only failed to expand to meet the needs of urban growth, but deteriorated quality-wise as well (Sosnovy, 1959; Hamilton, 1993; Samuelson, 2007). Adding to the problem were the inflexibility and spatial inertia of the centrally-planned economic system and the institutions preserving it, as well as the corrupt and inefficient state-run housing allocation framework (Bater, 1989; Hamilton, 1993; Harris, 1970; Domański, 1997; Morton, 1984). Therefore, the specific combination of administrative housing allocation procedures and policies during socialism created an urban setting in which most inhabitants of ECE and Soviet cities were unlikely to move once their minimum housing needs were satisfied, if ever (Buckley, 1995; Gang and Stuart, 1999; Gentile and Sjöberg, 2006). Like the built environment surrounding it, urban dwellers were essentially frozen in a 'stiff landscape' (Borén, 2005).

The post-socialist political and economic transformation brought about the abolishment of Communist restrictions on residential mobility and migration, although bureaucratic procedures remained in place in some Soviet countries (Sjöberg and Tammaru, 1999). Suddenly, households were theoretically offered the option of freely operating on the liberalized housing market in order to adapt or improve their living conditions. According to Sýkora (1999) the ensuing upward movement of households through the housing stock took one of three forms: *i*) social mobility of households fixed in their residential locations, mainly with the aid of in place adjustments of the present dwelling; *ii*) internal migration within the existing housing stock, often directed towards recently-renovated properties; as well as *iii*) out-migration towards new-build residential districts. In their entirety, these processes produced different paths of residential segregation and socio-spatial inequality in different neighbourhoods, depending on the particular mix of local circumstances (see, for example, Borén and Gentile, 2007; Stanilov, 2007 or Tsenkova, 2006).

However, considering that the dismantling of state socialism was followed by a dramatic decline in material living standards, undertaking *in situ* housing improvements was the only real residential mobility option for a vast majority of the population. But this gradually began to change in the late 1990s, thanks to the increased availability of long-term mortgages at low interest rates, coupled with the improved living standards in many post-socialist countries. Many post-socialist countries saw increased rates of residential relocation, which in turn triggered dynamics of residential suburbanization (Zborowski, 2005; Ruoppila, 2006; Leetmaa and Tammaru, 2007; Novák and Sýkora, 2007; Leetmaa, 2008; Tammaru *et al.*, this issue), gentrification and urban revitalization (Badyina and Golubchikov, 2005; Sýkora, 2005; Temelová, 2007) as well as the reurbanization of previously neglected inner-city quarters (Buzar *et al.*, 2007; Steinführer and Haase, 2007). Yet such

developments unfolded at a much slower pace and with a weaker intensity in Macedonia and Georgia, due to the relatively low income levels of the population, and their commercially undeveloped housing markets.

In addition to the housing shortage and low residential mobility factors outlined above, the rise of the VBEs as an *in situ* housing improvement option after socialism is linked to three additional conditions. First of all, they require a particular physical geography: VBEs can only exist in relatively warm countries, partly because the extensions are relatively difficult and expensive to heat during the winter months. They would simply not be viable in Poland or most of Russia. Second, VBEs are closely linked to economic activities outside the 'formal' economy: there is evidence to suggest that they are funded by remittances from family members working in Western European states (for a discussion of the Moldovan case, see Sigvardsson, 2006). As such, the emergence of VBEs may be seen as an expression of the multiple informal economies that engage households in a series of coping strategies in everyday life (for a further discussion, see Smith and Stenning, 2006). Third, VBEs substantially alter the structure and physical appearance of their host buildings and the urban environment more generally. As such, they are unlikely to emerge in societies where the legal framework surrounding construction is rigid and the planning regulations strictly enforced. Here again the legacy aspect is important: many of 'southern' post-socialist states were more tolerant in this respect, allowing plenty of space for the economy (and the shortages that permeated it) to be smoothened informally (Åslund, 2003, pp. 122-124).

In this context, it should be noted that both Macedonia and Georgia have experienced a difficult transformation process away from the regulatory practices of the centrally planned economy. Both countries are still very much in 'post-socialist transformation' mode, marked by the heterogeneous entanglement of regulations, legacies and practices at multiple scales, as well as the reinforcement of old path-dependencies and the creation of new ones. In Macedonia and Georgia alike, the post-socialist 'transition' has been accompanied by ethnic and political strife and instability, in addition to economic decline and hardship. This is despite the fact that last 5-6 years have been marked by a modest economic recovery in both states, alongside a general stabilization of the political environment (however, Georgia has fallen back into turmoil following the armed conflict with Russia in the summer of 2008).

Adding to the socio-spatial contingencies of VBE emergence in post-socialism are the specific historical trajectories followed by their host cities. Skopje, Macedonia's capital city, has in many ways followed a path of development mirroring its nation's. The city lies on a site that has seen a succession of different urban settlements for more than 2000 years. Having been partly destroyed – and then quickly rebuilt – after a powerful earthquake in 1963, the city's urban core combines socialist-style reinforced concrete buildings with an older architectural stratum, including: mediaeval fortifications and churches, Ottoman-era sacral, commercial and residential buildings, as well as some early twentieth-century (mostly inter-war) architecture (see Figure 1). Outside this distinctively bounded area one finds a combination of industrial and residential uses, the latter being mainly represented by either single family homes (many of which were originally built as prefabricated barracks after the 1963 earthquake but were then converted and extended into larger houses by their owners) or housing estates constructed in various periods after World War II. Unlike

other post-socialist states, however, the highest-quality apartment housing dates from the late 1970s and early 1980s, when economic prosperity in the former Yugoslavia reached its peak.

Tbilisi, the capital city of Georgia, concentrates almost a quarter of the total population (over 1 million) of the country, with over 200,000 additional visitors, mostly commuters from nearby cities such as Rustavi or Mtskheta. As such, it is the focal point of the state's political, economic, social and cultural life (Gachechiladze, 1995). Founded in the fifth century AD within a specific topographic setting, Tbilisi combines a medieval fortified town with a nineteenth century bourgeois city, once a regional centre under the rule of the Russian Empire. Still, most of contemporary Tbilisi was built during the last 50 years, under the influence of Soviet planning practices. Industrialization-fed urban growth resulted in the rapid territorial expansion of the city, so that over one third of the built-up area of Tbilisi (about 50 square kilometre) is now represented by residential land-uses. Several types of residential structures can be distinguished in the more recent urban fabric of the city: detached houses combined with multi-family apartment buildings from the late nineteenth and early twentieth century, multi-storey prefabricated panel housing estates from the Soviet period (many of which composed of so-called 'Khrushchevki', i.e., poor quality housing that is expected to represent the future slum of the post-socialist city, see French, 1995) as well post-Soviet multi-storey apartment buildings of varying quality constructed during the last 20 years (see Figure 2). This suggests that although a number of parallels can be drawn between the current Macedonian and Georgian institutional and political setting, Tbilisi and Skopje have followed markedly different urban development trajectories in their recent and more distant past.

Methods and locations of the study

The background research for this paper employed a combination of data gathering methods. We undertook questionnaire surveys in both cities, in addition to interviewing decision-makers, experts and local residents. In Skopje, the questionnaire survey took place in the district of 'Karposh IV' – a housing estate that consists almost entirely of apartment blocks constructed during the 1970s (see Figure 1 for an indication of its location within the city of Skopje). Overall, there are 29 5-storey blocks in the estate, built entirely from prefabricated panels that were put together in a specialized factory donated by the Soviet Union after the 1963 earthquake. The district also contains 26 apartment blocks built in the late 1970s, 1980s and 1990s, with a height ranging from 7 to 9 storeys. Although they contain reinforced-concrete-frame constructions, there are no VBEs on them due to enforced planning restrictions. Having established that there are 758 dwellings with external extensions in Karposh IV – either completed or under construction – we knocked on the doors of all the corresponding flats, hoping to elicit a response to our questionnaire. The response rate was disappointingly low, however, possibly due to the time period of our field research: we undertook the questionnaire survey during the summer of 2008, when many families are away on holiday. Thus, while 480 households answered the door (63 per cent), only 356 (47 per cent) accepted the questionnaires, and we only received 290 (38 per cent) of them back. This is despite the fact that the questionnaire itself was relatively brief, and did not contain any 'sensitive' questions about income.

In addition to the low response rate, a further caveat relating to the limitations of this method stems from the fact that although Karposh IV contains a very diverse range of VBEs, it is nonetheless viewed as one of the better-off housing estates, where the social mix has generally been skewed towards middle-income households. This means that the survey sample may have not been representative of the full mix of economic and social aspects of the VBE phenomenon in Skopje. Considering that we were unable to examine the broader representativeness of this sample due to the lack of disaggregated data at the neighbourhood scale, the results of the survey should be seen as statistically indicative, rather than representative.

A slightly different approach was used in Tbilisi. Here, 160 households were approached in six residential districts of different sizes: Saburtalo, Varketili, TEMQ, Didube, Dighomi and Vake (see Figure 2). Based on background research and expert interviews, it was judged that such a geographical mix of housing estates would adequately represent the widest possible variety of extension types and household situations. We received 115 completed questionnaires, amounting to a 72 per cent response rate. This may be attributed to the fact that we used local residents for administering the survey, which means that the degree of “trust” from the locals was rather high. However, the problem with the statistical representativeness that emerged in the Skopje survey was also valid here, as we were not able to form a quota-based sample due to the lack of neighbourhood-scale statistical data. The wider spatial spread of this sample, however, ensured that a broader range of neighbourhood contexts was included in the survey.

In order to increase the depth of the interpretive approach that we used to analyse the survey, we also undertook twelve semi-structured interviews (six in each city) with households living in apartments with VBEs. The respondents for these interviews were located in different parts of the two cities, and were characterized by a wide range of social, demographic and housing situations. We investigated their housing histories, socio-economic circumstances, residential preferences and attitudes towards VBEs, while scrutinising the extensions’ material and symbolic effects on the experience of everyday life in the respective apartments. The interviews, which took place at the respondents’ homes and lasted between two and three hours, were tape-recorded and later transcribed. We also interviewed five local authority officials (three in Skopje, two in Tbilisi) and eight experts (five in Skopje, three in Tbilisi), with the aim of exploring the broader socio-political perceptions of, and policies relating to, the VBE phenomenon.

VBEs in time and space: policy environment and historical dynamics of construction

One of the main objectives of our field research in both cities was to determine the ‘formal’ legal and institutional framework for the construction of VBEs, as well as the ‘informal’ strategic choices and policy decisions that have led to such urban developments more generally. We wished to scrutinize the extent to which this emergent phenomenon is grounded in a set of practices and developments that have been produced specifically during post-socialism, as opposed to the preceding period of central planning. Its relationship with official building and planning legislation was also examined, as it was unclear whether the existing legal acts can adequately regulate the specific economic and structural implications of this phenomenon. In

addition to such ‘temporal’ dimensions of the problem, we also became interested in the spatial aspects of VBEs, especially with respect to their geographical spread in different parts of the city. We were looking to see whether it is possible to formulate a typology of these developments according to their structural and functional qualities.

Skopje: a supportive institutional framework with a diversity of built forms

The interviews and field surveys that we undertook in Macedonia all pointed to the relatively recent nature of VBEs, which, as it seems, were non-existent during Communism in the form that is currently dominant (reinforced steel concrete frame constructions). This is not to say, however, that other types of balcony extension were not present during that time – the practice of enclosing balconies with walls and turning them into rooms without formal planning permission was already widespread since the 1960s. Under socialism, such developments partly evolved in response to persistent housing shortages in the bigger cities; this was especially the case in Skopje, which faced a massive influx of rural residents as a result of the rapid industrialization of the 1960s and 1970s. Due to relatively large average household sizes, exceeding 4 persons per household – at the time, it was common for extended families to live in one dwelling – as well as constraints on the housing market stemming from the nature of the centrally-planned economy, the available living space in many older housing estates often well below officially prescribed norms. This is one of the main reasons why the state unofficially tolerated the enclosure of balconies despite the lack of formal planning permission.

The lack of a clear set of housing policy guidelines further aggravated the rather haphazard and disorganized nature of the state’s involvement in housing construction and management during both the 1980s, and the post-socialist transformation process since 1990. Macedonia only adopted a formal housing policy in 2007, even though the creation of such a strategic document was foreseen by the national spatial plans adopted in 1982 and 2002 (IPPO, 1982; MUG, 2000; MTRM, 2007). Expert interviews in Skopje indicated that one of the reasons for the slow adoption of this document lies in the overly descriptive and superficial character of the housing components of the 2002 plan themselves, which instead of assessing the changing character of residential provision in the country under market conditions, merely summarized the situation on the ground based on census data, while estimating the future housing needs of the Republic, based on population projections. The policy recommendations and directions of the plan paid insufficient attention to the role of the market in housing provision and construction, extensively emphasising the role of the state – an obvious legacy of socialist thinking. More complex ‘soft’ issues, such as investment into housing maintenance and repair, were not treated adequately.

In the absence of a co-ordinated policy response and an adequate planning framework for the new economic and social forces influencing urban development, illegal housing construction boomed in the 1990s. Previously limited to the urban outskirts, residential buildings constructed without planning permission now started to spread into inner-city areas, often involving entire apartment blocks rather than only individual houses, as was previously the case. The appearance of the first VBEs can be dated to this period, when the practice of enclosing balconies in collective apartment buildings became more widespread, and started to involve the addition of new residential space beyond the external perimeter of the buildings, through various

technical means. Such practices were fuelled by the aggravation of housing shortage during this period (stemming from continued household growth and rural-to-urban migration), as well as the low affordability of new housing caused by the poor development of housing markets, the unavailability of competitively-priced mortgages, and the low income levels of the population as a whole.

In this context, it should be pointed out that VBEs have generally been part of the formal planning process, as the citizens who build them cannot legally do so without planning permission from the municipal authorities. Within their policies, VBEs are treated as part of the broader category of ‘external building extensions and supplements’, which may be constructed in apartment blocks under the remit of the law. But for an extension to be approved by the local authority, at least 51 per cent of the homeowners in the relevant apartment building must support it, and it should not exceed the external ‘envelope’ of the building foreseen by planning regulations (in most cases this envelope is 10-20 per cent larger than the object itself, but it is often not present in many newer buildings – hence the absence of VBEs from them). The administrative approval process itself is long and cumbersome, involving complicated bureaucratic procedures that should also include – at least in theory – frequent inspection checks at the construction site itself, to ensure that the extensions are in accordance with the planning permission issued by the municipality.

However, despite the elaborate legislative framework, interviews in several local authorities within the city of Skopje indicated that they have a limited field capacity to monitor the adherence of VBE developers to prescribed legal norms. Their building inspection departments face constant staff and budget shortfalls, and are often forced to divert resources onto more publicly visible problems, such the construction of entire residential and commercial buildings without planning permission. Although the law stipulates that external extensions should correspond to the aesthetic appearance and architectural style of the building, in practice there is little enforcement of this principle, as VBEs rarely match their host buildings in terms of size, form, style and materials. This may be partly attributed to the general lack of interest and initiative on the behalf of the state towards this type of residential development: neither the policy documents we examined, nor the decision-makers we interviewed had a clear strategy towards the issue. In practice, the state authorities tend to take a rather *laissez-faire* approach towards this type of urban development, as it is believed that they may help alleviate chronic housing shortages while improving the living conditions of the population. It appears, however, that the lack of enforcement is present more in the building rather than the planning phase, as VBEs are absent from many apartment buildings where technical and planning conditions do not allow their construction.

Given the lack of any concentrated efforts to curb its expansion, the VBE phenomenon expanded rapidly during the late 1990s and early 2000s, resulting in its widespread presence throughout Skopje’s collective housing estates (see Figures 1 and 3). As a result, different types of vertical extensions can now be found on virtually every apartment building in the residential blocks from the 1950s, 1960s and 1970s. They are less frequent – almost non-existent, in fact – in the more recent housing estates constructed during the 1980s, largely because the greater height of apartment buildings in such districts (most of them exceed seven stories) places technical limits on the addition of external extensions with independent frame

constructions. Another reason for the greater number of VBEs in such areas lies in the fact that they tend to concentrate higher-income residents, which may be more residentially mobile through the housing stock and hence do not require additions to the flats; however, despite receiving some anecdotal evidence in the ethnographic interviews towards such a claim, we could not confirm it through the survey data (largely because the survey did not contain questions about income).

We also attempted to develop a classification of VBEs, which proved difficult from the outset due to the great variety of structural types and building materials that they encompass, as well as the methodological framework of our study *per se*. In general, it can be stated that the extensions can be divided into different subtypes depending upon the following criteria, *inter alia*:

- whether they are finished or still under construction;
- the extent to which they rely on a frame construction, and the structural fabric of the frame (reinforced concrete, metal, wood);
- the extent to which they are walled up (whereby the extensions can serve as either balconies or enclosed rooms);
- the extent to which they 'envelop' the building from the outside (whereby the VBEs can represent either only balcony additions, or cover other parts of the external façade of the building; also, some extensions may cover a building from the top, adding a loft apartment)

In this context, it should be noted that concrete-frame constructions with brick-and-mortar walls extending only from the balcony of the building constituted around half of all the surveyed extensions. Approximately half of the cases within this group were represented by buildings with only balcony additions, rather than entire room enclosures. Most of the remainder of sample was comprised of VBEs of the same structural features, but enveloping the entire façade of the building, often leaving only windows from common parts of the building, such as stairwells, uncovered. However, due to the lack of strong planning regulations, it is common for different categories of VBEs to be present on the same building (see Figure 4). This means that it is possible to distinguish between buildings that i) are entirely covered with VBEs of the same type; ii) are entirely covered with VBEs of different types; iii) are only partially covered with VBEs, either because some of the extensions were left unfinished, or because their owners opted not to build one.

Tbilisi: from proactive Soviet-era policies to post-socialist disorder

Similar to Macedonia, Georgian VBEs are also linked to the persistent shortage of residential housing in that country. While Soviet legislation defined a living space norm of nine square metres per person as early as 1927, this proved increasingly inadequate as time went on. Although large scale housing programmes gave shelter to many citizens, they rarely managed to meet their housing needs in terms of space and comfort. It was only in the 1980s that the *Perestroika* brought relative 'humanization' of state ideologies and policies by starting to recognize the social problems and inadequate living conditions of the population. The resulting attempts to soften the rigid housing rules inherited from Soviet times led to the 'Zhilishche 2000' [Housing 2000] programme, aimed at providing a separate apartment or individual house for every Soviet family. But, being unable to provide a sufficient amount of improved

housing, the state offered various incentives towards private investment aimed at improving its citizens' living conditions.

As part of this approach, Georgia's socialist government issued a decree allowing interventions in state-owned housing in 1987. Considering that its decision was followed by an uncontrolled intensification of building extension activities, the government adopted a more specific resolution in 1989², which allowed for the construction of attached structures and extensions in buildings up to nine stories high. *Inter alia*, the resolution defined the rules of projection, construction and technical control, while regulating the sizes and volumes of extensions. Thanks to such policies, the period between 1988 and 1992 saw the erection of metallic frames for VBEs on the walls of hundreds of five, eight and nine storey block buildings in Tbilisi. One of the main reasons for the upsurge in building activities lay in the availability of affordable, better-quality construction materials, technical equipment and machinery. Our field survey indicated that more than 50 per cent of all VBE frames were constructed during this period (see Figure 3).

However, steadfast increases in the prices of building materials, coupled with high inflation rates and rising economic hardship, resulted in a dramatic decrease of VBE construction activity throughout the mid-to-late 1990s. As economic prosperity rose once again in the 2000s, Tbilisi citizens started to build extensions with renewed vigour, mainly focussing on the enclosure of some of the previously constructed frames with new walls. But the intensity of this 'second' VBE construction wave never came close to the initial levels, and has gradually been reduced to a trickle. Most building work is now oriented towards the repair and completion of existing VBEs (plastering walls, installing new flooring and utility services), partly due to the fact that many extensions still remain unfinished (according to our survey, this figure is at least twelve per cent).

As a result of the specific history of post-socialist housing development, different kinds of additions, extensions, superstructures (in the form of additional stories or lofts on top of existing buildings) can now be found on almost all types of residential apartment blocks in Tbilisi. VBEs are frequently represented among such constructions, although they are typical only for the Soviet housing estates. However, it is extremely difficult, if impossible at all, to formulate a typological framework for this phenomenon. The chaotic and haphazard nature of the building extension process implies that its outcome lacks any architectural plan or standard visual features. The classification that we developed in Skopje – where one can divide VBEs into several groups according to the spatial organization of extended space, the construction components, and building materials – makes less sense in Tbilisi, where the VBE construction process has been less regulated and more diverse, as people used the materials they could get and afford, employing either themselves or low-qualified private builders to do the work. Therefore, rather than looking at the VBEs themselves, it is more useful to distinguish buildings with VBEs according to the level of heterogeneity they display, and the condition up to which the owners can bring them. In this case, the three-tier categorisation developed in Skopje is also valid for Tbilisi, although it may be helpful if the third category (partially-developed VBEs)

² May 18th, 1989 - "On attaching of loggias, verandas, balconies and other auxiliary spaces to the state and cooperative houses at a cost of the dwellers/tenants"

was subdivided into two relatively distinct groups: *i)* buildings with ‘abandoned’ or unfinished VBEs (or elements of VBEs), and *ii)* buildings with VBEs that have been completed but only cover parts of the external façade (see Figure 5 for an illustration). While examples of the former are relatively common in Tbilisi, we did not encounter any in Skopje.

Despite the immense diversity of built forms and approaches embodied in this type of urban fabric, the local officials who we interviewed suggested that finished extensions should be considered legal and, just like in Skopje, can even be entered in the real property register (indeed, a few such cases already exist). This is despite the fact that building inspectors had already detected and destroyed several ‘invalid’ and ‘unsafe’ extensions (although it was not made clear to us why they had become interested in those particular cases). In their entirety, the field observations, surveys and interviews that we undertook indicated that there is no unified approach and defined policy towards VBEs in Georgia: municipal governments simply lack effective measures to regulate the process. However, local authorities and experts are absolutely negative about this phenomenon, which is seen as menace to the development of the city.

The social and economic aspects of VBEs

We now turn to the ‘everyday’ dimensions of VBEs, in order to explore the multiple ways in which this phenomenon shapes, and is shaped by, patterns of housing dynamism and economic activity in the city. One of the key issues in this regard pertains to the housing needs addressed by VBEs: it remains unclear to what extent these urban structures can be considered as a form of ‘in situ’ residential mobility, as opposed to an additional outlet of capital investment. If the former is true, then the issue of the relationship between housing events and VBEs becomes particularly important. We were interested in such questions mainly because it is still unclear which social groups benefit from VBEs, and whether they are a low- or high-income phenomenon. The field research also looked at the urban economies relating to this type of urban development, in terms of the types of firms, individuals and social networks involved in its construction.

Skopje: the strive to improve living conditions spawns a new urban economy

Both the household interviews and statistical survey that we undertook in this city indicated that VBEs overwhelmingly serve a single function: the enlargement of dwelling space in order to improve the domestic living conditions of its occupants. They are rarely linked to housing events in any individual household, mainly because their construction requires the approval of the majority of residents in a given building, and the process for obtaining permits is relatively long. However, they do have a significant effect on residential mobility, as they allow households who lack the financial resources to purchase or rent a new home to continue living in the existing dwelling. Thanks to VBEs, extended families with limited incomes may continue to inhabit a single apartment more comfortably. As such, the extensions facilitate demographic events in the household, rather than following them – contrary to the logic of the traditional ‘housing career’ and life cycle models (Rossi, 1955; see also McAuley and Nutty, 1982). As pointed out by 65-year old ‘Milosh’ and his wife (both of them recipients of state pensions):

‘It really changed our life. We used to live in a one-bedroom, 60 square metre apartment with our son and his wife. Being unemployed, they can’t afford to move to a different home. Thanks to the addition of a new 20 square metre room, which is used as a kitchen, we could convert the old kitchen into an additional bedroom. They are considering having a child now’.

This was also confirmed by the survey in Karposh, where 22 per cent of interviewed households stated that the VBE was a substitute for moving to a new dwelling. However, building an external extension is also seen as a profitable conduit for investing surplus capital and increasing the market value of the home: almost two thirds of the respondents in Karposh stated that they had financed the VBE from their own savings. This is linked to a more general situation in post-socialist Macedonia, where housing investment has been a common economic investment strategy as a result of the poor development of financial markets and low confidence in the banking sector (MTVRM, 2007). Such was the case with ‘Vesna’, a 45-year-old public servant who lived with her husband (a mechanic) and two teenage children in a 55 square metre apartment with a 35 square metre extension:

‘We weren’t sure what to do with our savings left over from the time when my husband worked in Germany. Putting them in a bank was not an option considering how many banks collapsed during the past 10 years. We are using part of the money to build an extension, and bought an apartment for our children with the rest. Eventually we hope to be able to sell this flat and gain from the increased space brought by the extension’.

Although this household is clearly not facing serious economic hardship, most of the experts and households who we interviewed thought that VBEs are mainly a low-to-middle income phenomenon. To a certain extent, this is confirmed by the types of residential districts where such forms are concentrated – housing estates constructed between 1950 and 1970 that have seen a gradual deterioration of their physical characteristics and an outflow of wealthier residents to suburban areas with individual housing. Indeed, despite being socially and professionally diverse just like similar districts in other post-socialist cities, such areas were generally inhabited by lower-income, working-class residents already during socialism (in Skopje, this is partly a result of the segregation processes created after the 1963 earthquake, whereby more affluent households were housed in newly-built family houses at the outskirts of the city – see Buzar, 2007). Unfortunately, there was no direct way of confirming this relationship through the survey, as it did not contain questions about income.

We found a great deal of variation in the functions played by domestic residential space added by VBEs. In general, such structures are mainly used for cooking and storage, rather than serving as additional bedrooms or living rooms (see Figure 6 for an outline of the relevant results of the survey). Some of the reasons for this situation lie in technical difficulties associated with introducing heating systems into the extensions: we did not find any cases where district heating radiators or chimneys for wood stoves – currently the most affordable method of heating the home in Macedonia – had been brought into the extensions. Even electric heating is rare, mainly because the power installations in the extensions are insufficient for the voltage current required by such appliances. It also transpired that VBEs have impacted the internal configurations of their host flats in multiple ways. In cases

where they are added to panel block buildings where the external walls are load-bearing, the extensions rarely exert a significant impact on other domestic spaces because the built fabric is insufficiently structurally flexible to allow for the creation of new room arrangements by removing internal partitions. However, the converse is true in cases where façade walls adjoining the VBEs can be knocked down to reorder the apartment: indeed, we encountered several cases where entirely new room configurations had been made (see Figure 7). The extensions also differ in terms of the amount of added space. According to the survey, the average contribution of VBEs to the size of the their adjoining dwellings amounts to approximately 30 per cent of the original total space (see Figure 8). However, this figure reached *ca.* 70 per cent in 20 per cent of the households surveyed – these are mainly the cases where the extensions envelops the entire façade of the building such as in the examples shown in Figure 4.

The construction and use of VBEs has spawned an entire urban economy. The Karposh survey indicated that 95 per cent percent of the extensions have been built by private firms, although this share may be lower in other parts of the city (the experts we interviewed pointed out that some of the poorer western parts of Skopje contain a higher frequency of VBEs that have been built in an improvised way, by the residents themselves). In about 30 per cent of cases within the survey, the financing of VBEs had been undertaken by the developers themselves, in turn for receiving the right to build and own an additional loft apartment on top of the block (as in example B in Figure 3). Both the interviewed experts and anecdotal evidence indicated that this practice is gaining popularity across the city – as the residents needn't commit any financial resources to the extension provided a sufficient number of them agree to it, and the technical properties of the building permit its construction. VBEs also play a significant role in hosting different types of economic activities: ground floor conversion of flats with extensions into shops, medical practices, and so on, is an increasingly common phenomenon in Skopje, as is the use of VBEs for informal domestic work. Thus, the extensions serve as the focal point for a much wider dynamization of economic life in the city.

Tbilisi: 'in-place' residential mobility through VBEs

As was discussed above, the emergence of a favourable political context for the construction of VBEs in Georgia was predicated on the chronic shortage of housing and the historically low residential mobility of the population in the Soviet Union. The construction boom that followed the relaxation of planning regulations in this domain can therefore be taken to signify that VBEs are directly linked to the lack of dwelling space in Georgia, and that the primary reason for their expansion lies in the need for 'in-place' adjustments of the size and function of the home (which allow the household to experience several housing events without relocation, see Mandič, 2001). In addition to confirming such findings (as over a quarter of all respondents said that they would have ideally moved to another dwelling had it not been for the VBE), some of the household interviews also showed that the rise of this phenomenon may also be fuelled by cultural factors, as some of the surveyed families who had recently migrated from rural areas felt a strong emotional attachment to their homes, and thus refused to move to other dwellings even if they had the financial capital to do so; having adapted to their urban apartments, they preferred to increase their size and function, and inhabit them as extended families.

The multiple functions and uses served by VBEs imply that the size of space added to apartments through them differs significantly across different districts and dwellings in the city. In the cases where extensions are implemented in line with official regulations, which allow for only the balconies of the building to be enlarged according to strictly defined construction parameters, the amount of added space rarely exceeds 20-25 per cent of the size of the original flat. However, VBEs are often attached to the housing blocks from two and even three sides – thus doubling the size of the apartment to which they are added – in situations where the flats are extended without regard to official restrictions and rules. As indicated by the survey, the amount of added space reaches, on average, approximately 40 per cent of the previous dwelling, which is equivalent to over 60 per cent of original living space (for a more detailed breakdown, see Figure 8). As such, VBEs are used for different purposes: according to the survey, they generally serve as new bedrooms and living rooms, although auxiliary functions – kitchens, extended ‘loggias’³, balconies or store rooms – are also popular (see Figure 7). The utilization of VBE space for commercial purposes is rare, and happens only if the original apartment is located on the ground floor of the building: we had a few respondents who were using the extensions for mini markets, fast food or beauty salons. There were also several cases where VBEs had changed their uses over time, or had led to a transformation the function of the original dwelling. For example, one of our interviewees had fused two bedrooms into a large living room thanks to the addition of an external extension.

Unlike Skopje, Tbilisi’s VBEs were initially constructed by state building companies, which started installing metal extension frames already in 1987. However, architectural co-operatives soon entered this business, with private enterprises and builders completely taking over the sector in the 1990s. A significant number of the extensions were constructed by their very residents, as demonstrated both by the results of the survey (a quarter of the respondents stated that they built the VBE by themselves), and the improvised character of many such structures. This was especially true in the early 1990s, when households could obtain cheap building materials at low prices through informal, non-monetary channels. The increasing marketization and ‘formalization’ of the building sector has meant that materials and workers for VBE construction have become increasingly expensive, with networks of kin and connection/friendship becoming less important in terms of obtaining the necessary resources.

VBEs as an urban development factor

In this, the final section of the paper, we discuss the structural and visual impacts of VBEs on urban spaces. We focus on the multiple ways in which they affect the use of, and movement through, territory in the city. Some of the more interesting questions in this respect refer to the role of these structures in redefining the boundaries between public and private space in the city, as well as their short- and long-term effects on urban social, economic and spatial development. We look at some of the main differences in the perceptions of the phenomenon among the local population and experts, while highlighting some of the discourses that permeate such understandings.

³ ‘Loggia’ in this context has the Soviet meaning – a glazed balcony on an apartment block.

Skopje: kitsch, seismic hazards and concerns about the future

Although many VBEs in this city employ relatively expensive materials and external finishes – such as decorative bricks and wrought iron fences – very few, if any, of them comply with their host buildings in stylistic and aesthetic terms. In fact, there is almost no congruence between the architectural styles of the VBEs and the original apartment blocks in the overwhelming majority of cases, as the extensions rarely follow the pure modernist forms of the blocks: they are either very shoddily built in the cases of low-income owners, or are in line with a more ornamented style that sometimes becomes overt neoclassical kitsch in situations where the investors are more affluent (Figure 9). Nevertheless, the placement of VBEs on the external facades of apartment buildings, together with their large numbers and volumes, means that they have come to dominate the visual landscapes of many collective housing estates in Skopje.

The rapid expansion and aesthetic inferiority of many VBEs was noted by many of the interviewed architects, who termed them urban ‘scars’ and ‘vandalism’. Experts’ complaints also related to the seismic safety of these structures, as it is feared that they might endanger the mechanic resistance of the host buildings in the case of a strong earthquake:

‘The extensions often encase the apartment blocks with reinforced concrete frames that will oscillate on a different frequency during an earthquake. That will place additional strain on the original buildings themselves, which, even if built to withstand the earthquake, may collapse as a result of the lateral strain created by these oscillations’ (Local expert interviewed on the 17th of July 2008).

However, such problems aside, VBEs do not seem to have exerted a major negative effect on everyday mobility and the use of micro-space in the city. Although some of the extensions are very expansive and extend several metres beyond the external boundaries of the buildings, they rarely significantly encroach on public space. This is mainly due to the sheer size of common areas between the buildings, especially in some of blocks within the socialist housing estates, which are surrounded by large green spaces that are poorly maintained. Some residents did report that the VBEs had worsened the insulation and aeration of their homes – particularly in situations where they had opted against a VBE, thus having the external façade of the apartment surrounded by an empty frame (such as in Figure 10) – although for the most part their assessments were positive. This is confirmed by both the share of survey respondents who had a favourable opinion of VBEs (65 per cent) and some of the household interviews:

‘I think it makes our building look nicer on the outside – the façade was really ugly and falling apart previously. I know that both myself and our neighbours live better now. We have much more space in our apartments, our lives are more comfortable now’ (Martin, construction worker, five member household living in a 60 square metre apartment with a 25 square metre extension).

‘We extended the balcony once, and now we are building a new extension on top of the old one – the old one will serve as a room and the new one as a

balcony. Some of our neighbours are really going into extremes. In the adjoining staircase one guy has turned his former one bedroom apartment into a four bedroom one. There are three new bedrooms in the extension. It's crazy' (Nikola, travel agent, 2-member household living in a 55 square metre apartment with a 10 square metre extension).

How these developments may affect Skopje's development over the long run, however, is an entirely different question. All the experts who we interviewed were very apprehensive about the VBE phenomenon, fearing that it may hamper any efforts of the city authorities to knock down or reconstruct socialist housing estates in the future. They pointed out that most of the 1960s and 1970s blocks have a 'best-before' date and will be soon up for demolition, as they were built with easy-to-dismantle prefabricated panels. However, the extensions are much more solid, using reinforced concrete frames and brick walls that will make the future disassembly of these blocks and the relocation of their occupants more costly. It is feared that VBEs will 'freeze' their host buildings in time, thus increasing their durability without significantly improving their material condition. As pointed out by one of our interviewees: 'what seems like a cheap intervention now will become much more expensive to deal with in the future'. Technically, it is believed that the VBEs worsen the energy efficiency of such estates, because they create thermal bridges that conduct heat out of the buildings. As many of them are built and insulated to a low energy conservation standard (often using only single-skinned walls), it is likely that heat loss through the external fabric of the building is now higher than average.

Tbilisi: experts disagree with the residents' opinions

Just like in Skopje, Tbilisi's VBEs have also exerted major visual impacts on the external appearance of apartment blocks in the neighbourhoods where they are present, thanks to their sheer volume and physical incongruence with the host buildings. Yet they do not seem to have major implications for the micro-articulations and experiences of urban space, as they tend to occupy the edges of apartment blocks, well outside the main communication arteries and communal spaces between them. This was reflected in the outcomes of the survey, where more than half of the respondents appraised these structures in a positive manner. However, we did hear numerous complaints about the dramatic changes of the physical plans of the buildings brought by some of the VBEs with very irregular shapes, as well as their negative effects on the deterioration of building safety, green space and illumination, alongside the increased dampness and mould that they sometimes introduce. Field evidence also pointed to the emergence of numerous forms of indefensible spaces such as dark 'entrance tunnels' to apartment blocks (whereby the entrance to the building is completely surrounded by the extensions).

Overall, eight per cent of the interviewees thought that the VBEs had a negative effect on the city, with a further seventeen per cent expressing mixed opinions about them; their main complaints related to the aesthetic aspects of the structures, the low quality of construction, as well the potentially dangerous health and safety implications. When informed about the high level of support towards VBEs indicated by our survey, a local expert stated:

‘That points to a problem, which I consider as very serious one ... quite a big part of the population of Tbilisi doesn’t care enough for the quality of the living environment, allowing the deterioration of safety, health and the image the living place for a few square metres of extra space. It shows the immaturity of urban traits, as well as the pseudo-urban behaviour and culture of a remarkable part of city dwellers’ (Local expert interviewed on the 7th of April 2008).

Such views reflect the major shift in expert opinion that has occurred during the last 20 years. In the initial period of construction, VBEs were seen in favourable light by city planners and the academic public alike, as it was hoped that they could help bring colour and life to the otherwise drab and decrepit Soviet housing estates, while improving the living standards of the population. However, discourses changed very quickly as a result of the rapid and unregulated expansion of the phenomenon, and its negative impacts on the visual appearance and socio-economic functionality of urban space: we often heard the phrase ‘vertical slums’ in relation to such developments (Figure 11). Just like in Skopje, one of the common fears of urban planners and experts alike is that VBEs will petrify a particular phase of post-socialist development in space, discouraging residential mobility out of Soviet housing estates which are long overdue for a fundamental reconstruction and reorganization. It is believed that although VBEs increase the public urgency for the renovation of such districts, the extra space they have added to the dwellings will also give additional bargaining power to their residents in any future attempts to move them out of their homes.

Conclusion: a path-dependent and –shaping phenomenon

In their entirety, the different components of the on-site research that we undertook in Skopje and Tbilisi indicated that VBEs are an important, but often neglected emergent development that is present in large parts of the two cities. We uncovered a number of similarities with respect to the phenomenon across both geographical contexts. Among the most prominent of these is the fact that the municipal governments of the two cities do not have a clearly defined policy towards VBEs, and are either poorly aware of, or unable to deal with, their negative implications. In general, decision-makers are rather tolerant towards the extensions, as it is hoped that they will help alleviate housing shortages and the poor living conditions of the population. In most cases, the construction permits for the extensions are fully legally sanctioned, although there is little control on the subsequent implementation of the building parameters of the permit (which are often exceeded in practice).

The lack of urban regulation has transpired despite the increasingly vociferous opposition towards the local authorities’ *laissez-faire* approach among urban planners and experts alike. Perhaps one of the reasons for the municipalities’ hands-off policy lies in the local residents’ general approval of VBEs, as well as their increased frequency among middle-income residents. However, although the extensions’ encroachment on the public space between the apartment blocks doesn’t seem to have taken on significant proportions in most cases, they often exert negative impacts on some of the health and safety aspects of the buildings, especially in situations where individual apartments have been ‘encased’ by them. Experts in both cities are concerned about the long-term consequences of these developments on the technical

properties of the socialist housing states, and the ability of city authorities to renovate them.

Despite these general similarities, VBEs in both cities display a number of specificities which require further attention and investigation. The historical dynamics of their construction have been very different in the two countries, having started much earlier in Georgia, and with direct support from the state. Moreover, the initial burst of building activity in Tbilisi seems to have been subsided in the late Soviet years, only to be followed by a second, smaller upsurge in the early 2000s. This is very different from the Macedonian case, where there was no overt encouragement of such building activities: they spontaneously emerged towards the end of the 1990s, and have gradually gathered pace since then (although, here, too, VBE construction rates seem to be dropping). In general, the VBEs are built to higher and more unified construction standards in Skopje, where they are mainly composed of reinforced concrete frames infilled with decorative brick walls. VBEs mostly have auxiliary residential functions (balconies, storage rooms) in this city, and are often seen as an alternative form of investment. That is rather different from Tbilisi, where the extensions are much more diverse in terms of architectural style, size and structure, thanks to the lack of state control and the higher frequency of self-provisioned construction work. Here, they are used for primary residential purposes – living rooms, bedrooms – and are more geared towards improving the quality of life of their inhabitants, rather than the market value of the apartments themselves.

Going back to some of the issues and themes raised in the background literature review to the paper, it may be argued that VBEs represent a temporally- and spatially-specific material embodiment of household ‘coping’ strategies in the post-socialist city. Arising as a result of the inability of low- and middle-income households to relocate to a new dwelling, they have provided a form of ‘in situ’ residential mobility while significantly improving the living conditions of most of their residents. An entirely new semi-formal economy has grown out of these urban structures, linked to both the provision of services for constructing them, as well as the activities that they have hosted. However, although the VBEs have clearly had a short-term positive effect in terms of ameliorating the housing problems faced by the population, they are built to a low technical standard – especially in terms of energy efficiency – that may not correspond with the local authorities’ efforts to promote the sustainable development of the types of residential districts in which they are located. Their rigid material presence in the urban landscape implies that the future use and management of such neighbourhoods will be structurally embedded within a specific development trajectory that may not necessarily be beneficial or efficient for their residents. As such, the extensions match Sýkora’s (2008) conceptualization of post-socialist phenomena that are simultaneously path-dependent and path-shaping: they arise from the specific legacies of socialist central planning and the dynamics of post-socialism, while creating a dual social and spatial ‘lock-in’ that will determine the future development of their host societies.

The mass-emergence of VBEs in a selected set of post-socialist cities implies that their future trajectories of socio-spatial segregation and urban development may follow a different path from the rest of the ECE region. While it is now generally clear that high- and middle-income households in most Central European and Baltic states have exhibited a pattern of residential relocation away from the types of

neighbourhoods that host VBEs in Macedonia and Georgia – which in turn can lead to new segregation dynamics and socio-spatial disparities – there is little knowledge about the future of VBE neighbourhoods in the post-socialist cities where they are present. One of the key questions in this regard refers to the ability of the extensions to alleviate emergent dynamics of segregation, out-migration and social decline, in light of the apparent improvement of their residents' housing standard without the need for relocation. It also remains unclear to what extent VBEs will provide a form of upward social mobility over the short term, as opposed to a long-term freezing of the 'status quo' and a continuation of unsustainable housing practices and policies. Whatever the answers to such questions, it is without doubt that this form of urban development is already deeply implicated in the transformation of spatial tissues and residential conditions in many post-socialist cities.

Figure 1: Map of Skopje, showing the general location of districts with VBEs relative to other major urban structures (A = location of Karposh IV).

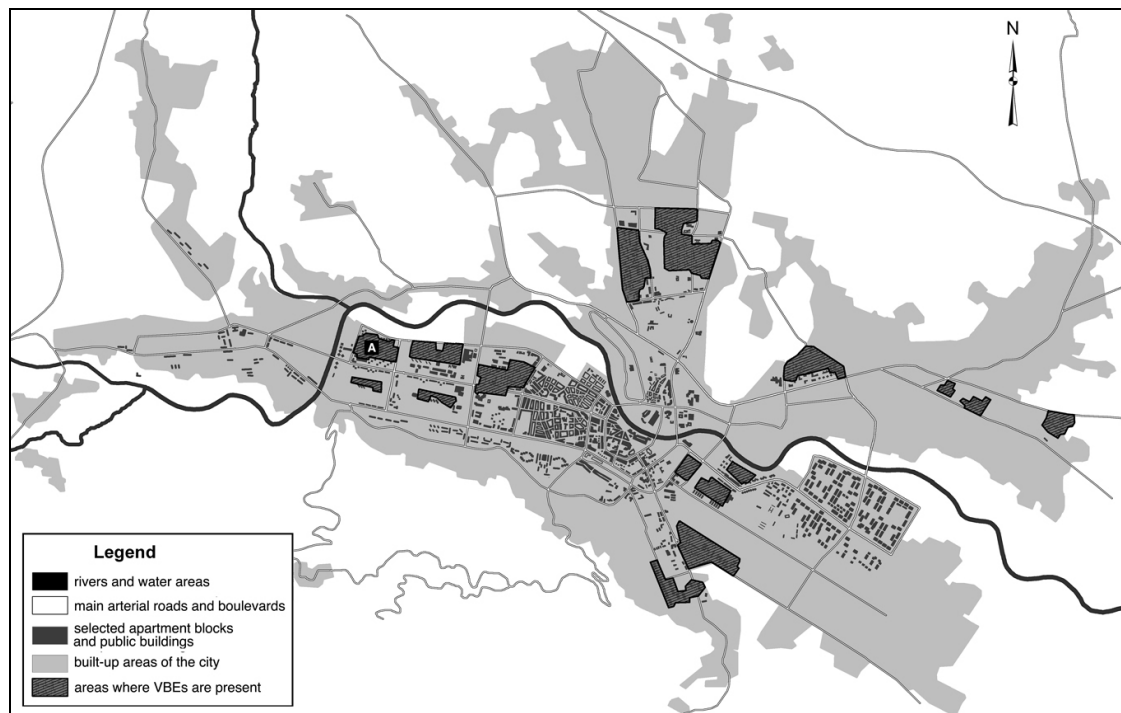


Figure 2: Map of Tbilisi, showing the general location of districts with VBEs relative to other major urban structures (1 = TEMQ; 2 = Dighomi; 3 = Didube; 4 = Saburtalo; 5 = Vake; 6 = Varketili)

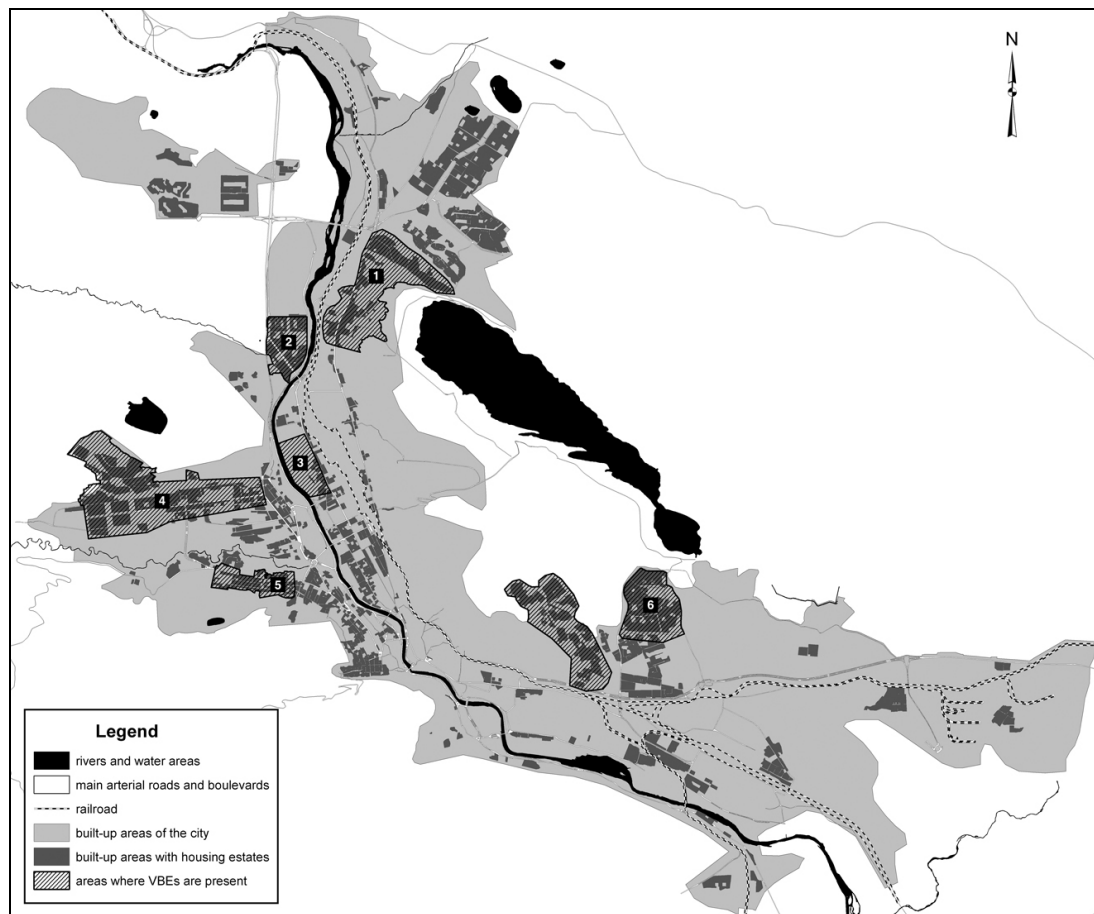


Figure 3: Percentage shares of different groups of VBEs within the questionnaire survey samples, according to the period of construction.

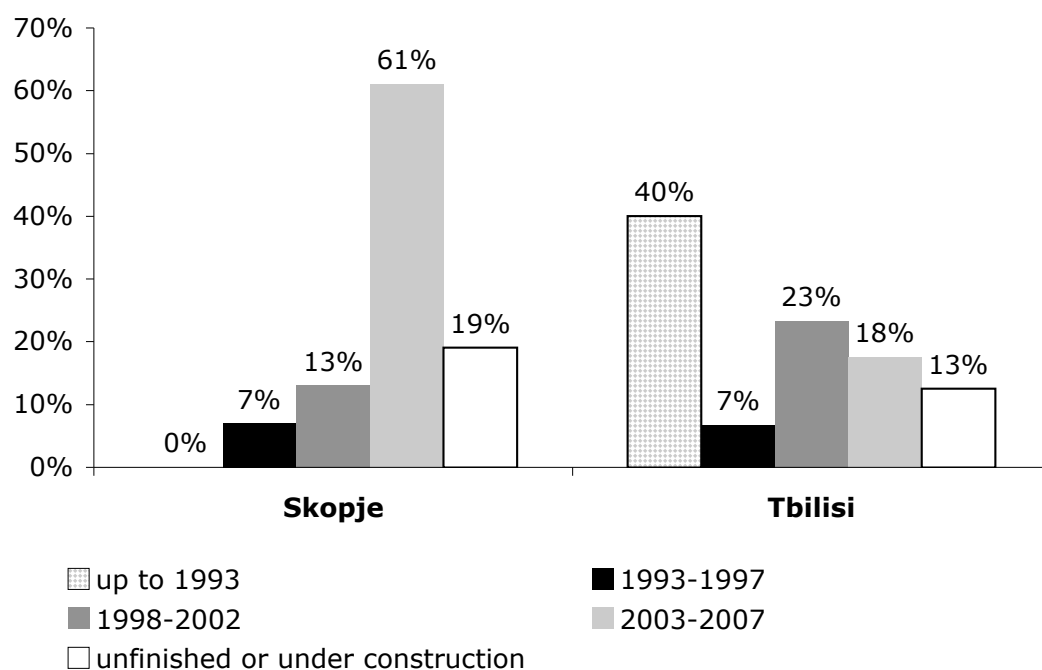


Figure 4: Main types of extensions in Skopje. A – an apartment block in Karposh IV containing both (1) a reinforced-concrete frame VBE that extends only from the former balconies of the building and (3) a steel-frame VBE that covers the entire length of the respective apartments, also including (2) a medical practice on the ground floor; B – a VBE that encases the entire building, adding an extra story and a loft on top of it.

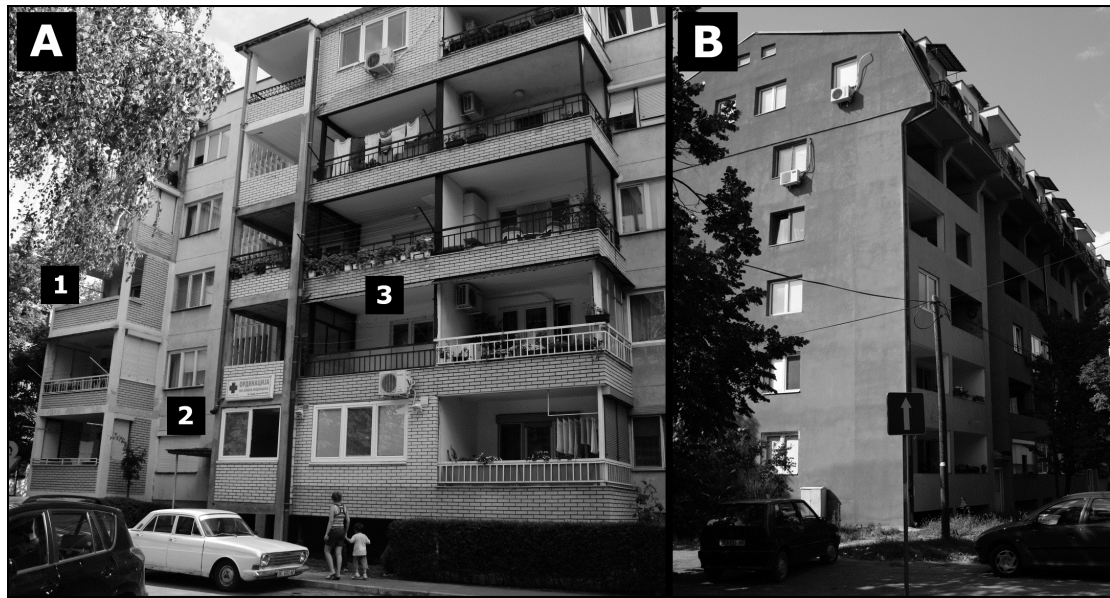


Figure 5: Different types of buildings with VBEs in Tbilisi: A – a complete, relatively uniform extension covering the entire length of the building (in Saburtalo); B – the extensions cover the entire length of the building but are structurally heterogeneous (in Dighomi); C – abandoned extension frames (in Varketili); D – incomplete extensions that cover only part of the building (in Dighomi).

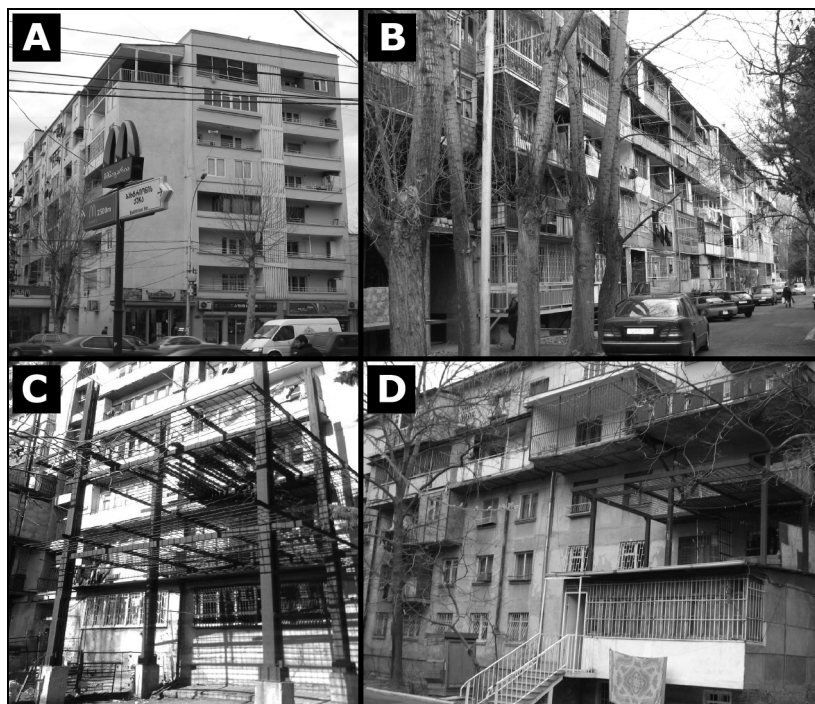


Figure 6: Shares of different uses of the VBEs within the survey samples.

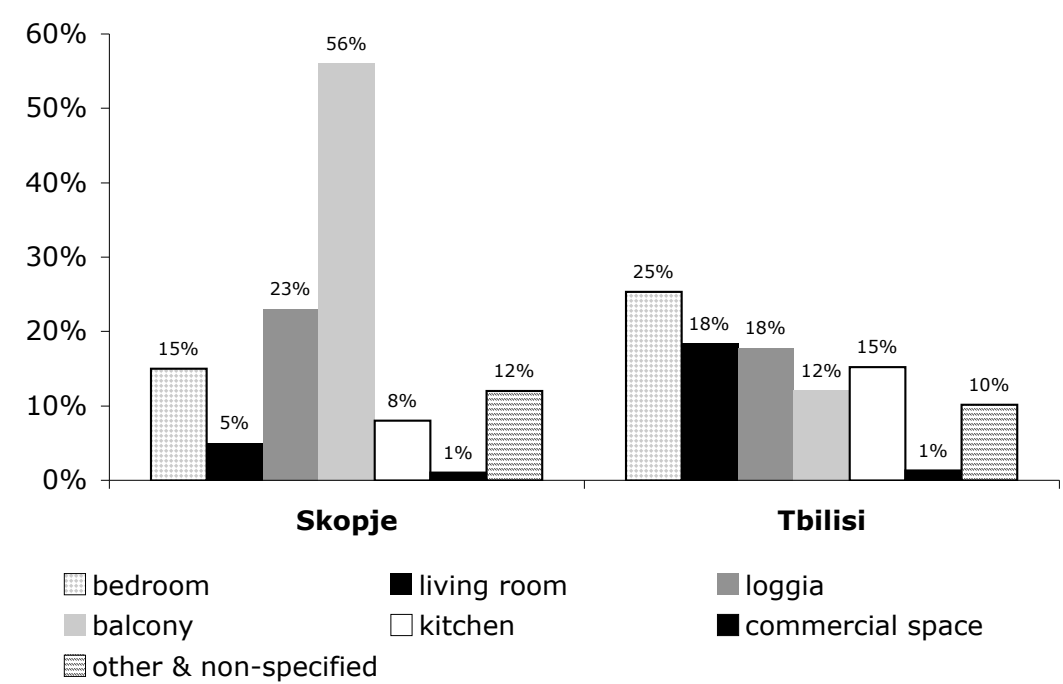


Figure 7: Changes in the internal configuration of a Karposh IV apartment following the addition of a VBE (walls are indicated with lines, doors with arrows, new windows with black circles, and the space of the extension with a grey shaded area). Before the extension was built, the apartment contained a living room with a kitchen area (1), a bathroom (2), bedroom (3) and balcony (4). The VBE allowed for the creation of three new bedrooms (A, B, C) and a new living room (D). The location of the kitchen was changed (E), as was the balcony (F). The drawings are not to scale.

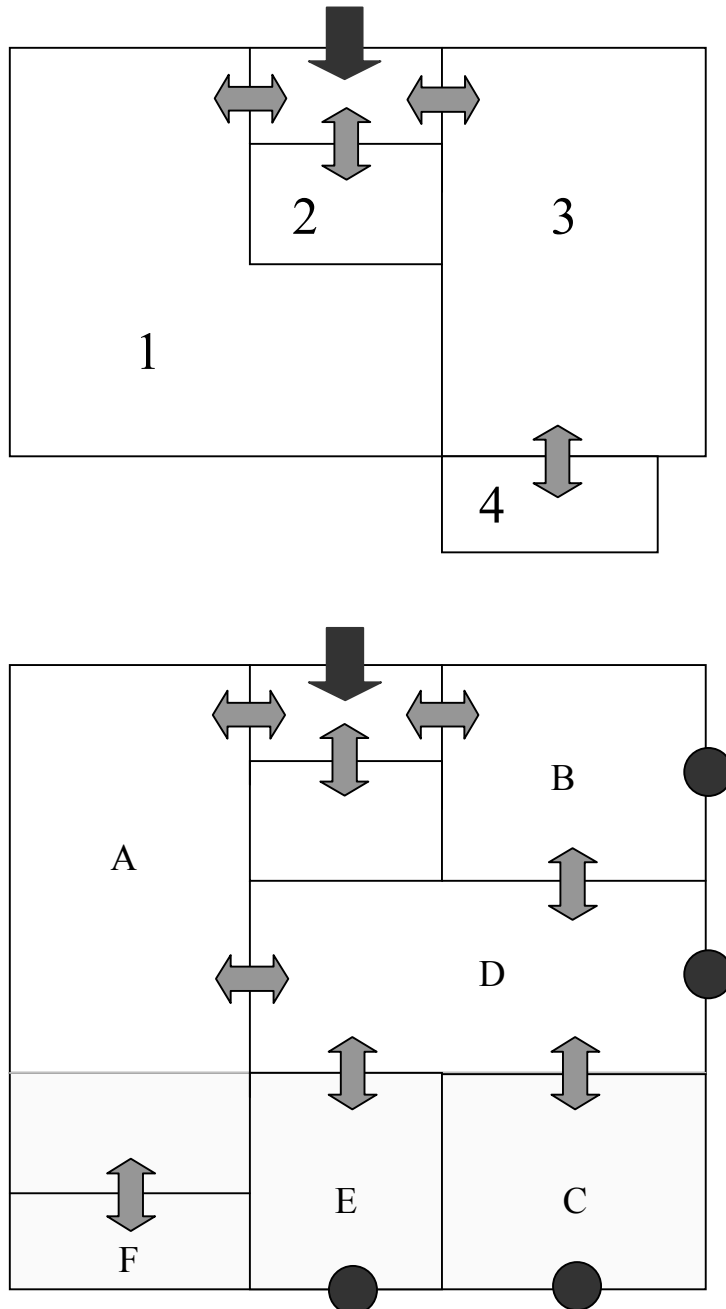


Figure 8: Size distribution (expressed as a percentage share of the original dwelling space) of the VBEs in the two survey samples.

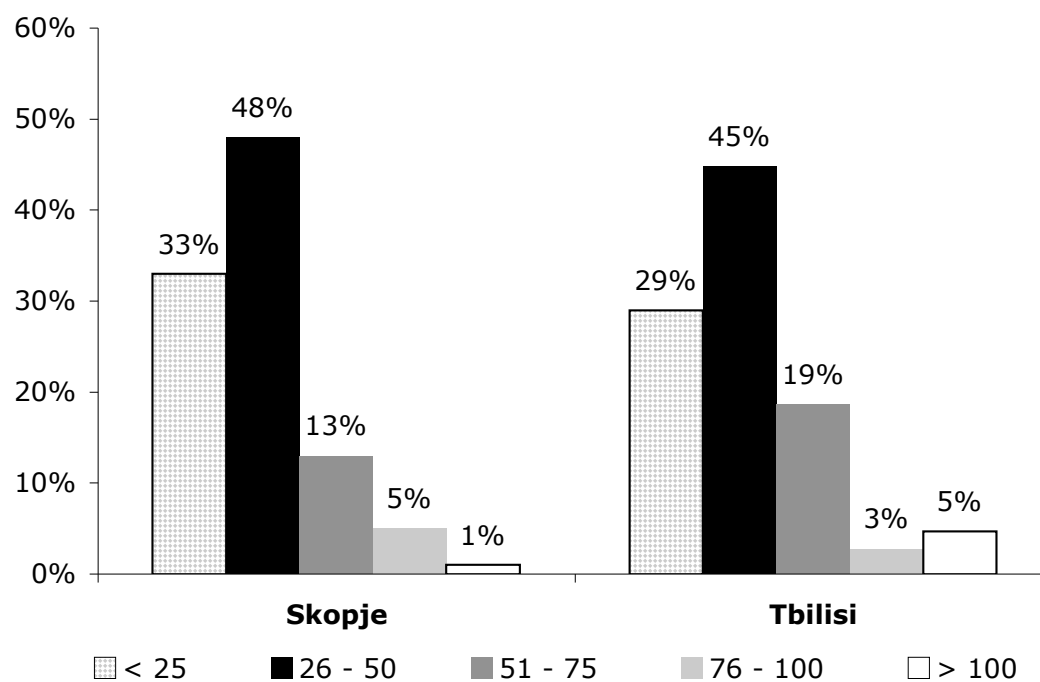


Figure 9: An example of a situation where the architectural style and physical size of VBEs are incongruent with the features of their host building (the original appearance of the balconies can be seen from the blocks in the background).



Figure 10: If an apartment owner opts out of a VBE in a building where the majority of tenants support it, they may find their balcony destroyed and encased with a reinforced concrete frame as in this example from Karposh IV.



Figure 11: The types of VBE developments labelled ‘vertical slums’ by the experts we interviewed in Tbilisi.



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