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Issues of Urban Overdevelopment in Post-Socialist Bulgaria

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Abstract. Urban overdevelopment has become one of the most controversial issues of contemporary urban development in Bulgaria and other post-socialist countries. While extensive research has examined urban sprawl and low-density expansion in Western Europe and North America, considerably less attention has been paid to high-intensity urban overdevelopment within already urbanised areas. This paper examines the characteristics of urban overdevelopment in post-socialist Bulgaria and explores its relationship with development rights and the institutional functioning of urban development. The central thesis is that urban overdevelopment results from the inappropriate allocation of development rights rather than from excessive development intensity alone. Consequently, the benefits generated by intensive development are largely captured by private landowners, whereas many environmental, social, and infrastructure costs are transferred to local communities. Drawing on the Theory of Complex Property Rights, the paper treats development rights as a principal institutional resource whose allocation fundamentally shapes urban development outcomes. The analysis argues that development rights are created through municipal planning and supported by public investment in infrastructure and urban services. Consequently, local communities have a legitimate claim to part of the value generated by these rights. Urban overdevelopment is therefore interpreted as an institutional consequence of the improper allocation of development rights and the resulting imbalance between private and public interests. The paper concludes that urban overdevelopment cannot be addressed solely through traditional planning regulation. It argues that market-based instruments founded on the beneficiary pays and user pays principles—including betterment levies, transferable development rights, and charges on development rights—provide promising mechanisms for improving the allocation of development rights and promoting more sustainable and equitable urban development.

Keywords: Urban overdevelopment; development rights; property rights; value capture; urban justice; post-socialist cities.

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INTRODUCTION

Across Europe, urban growth has generated increasingly intense debates about its environmental, social, and economic consequences. While in many Western European countries these debates primarily concern urban sprawl and land consumption, in several post-socialist countries the dominant concern has been the rapid intensification of urban development within already urbanised areas. In Bulgaria, this phenomenon—commonly referred to as urban overdevelopment—has become one of the most controversial issues in urban development over the past three decades.

The trend emerged during the second half of the 1990s in Bulgarian cities and, after 2003–2004, rapidly expanded into tourism and recreational areas, particularly along the Black Sea coast and in mountain resorts [1, 2]. Although the term urban overdevelopment has no universally accepted definition, in the Bulgarian context it refers

to excessive expansion or intensification of development beyond levels regarded as acceptable by local communities and planning professionals. It is widely associated with the loss of open and green spaces, increased traffic congestion, environmental degradation, and growing pressure on urban infrastructure [2, 3, 4, 5].

Although the phenomenon has received considerable public attention in Bulgaria, its conceptual foundations remain insufficiently developed. This paper argues that urban overdevelopment should not be defined by fixed density thresholds but as development exceeding context-dependent optimal levels of density and intensity. It further argues that the phenomenon is fundamentally related to the institutional allocation of development rights and that more appropriate allocation mechanisms, supported by market-based value capture instruments, can help restore the balance between private and public interests.

The paper has three objectives. First, it examines the characteristics of urban overdevelopment in Bulgaria and compares them with similar processes observed elsewhere in Europe. Second, it analyses the relationship between development rights, urban overdevelopment, and the principles of justice and planning efficiency. Third, it discusses how market-based planning instruments may contribute to addressing overdevelopment while promoting more sustainable urban development.

The main research questions are:

- What is the nature of the problem of urban overdevelopment in Bulgaria compared with similar processes elsewhere in Europe?
- How are development rights related to urban overdevelopment, distributive justice, and the efficiency of urban planning?
- What planning solutions can be proposed to address the problem of urban overdevelopment?

URBAN OVERDEVELOPMENT IN BULGARIA: WHAT IS URBAN OVERDEVELOPMENT AND DOES IT ONLY HAPPEN IN BULGARIA?

Emergence and Reasons for the Trend of Overdevelopment in Bulgaria

The trend towards urban overdevelopment in Bulgaria emerged during the second half of the 1990s [6-8]. Its origins are closely related to the restoration of private property rights following the transition from socialism to a market economy.

During socialism, urban expansion was dominated by large prefabricated housing estates located primarily on the urban periphery. Between 70% and 85% of new residential construction in large cities was concentrated in these estates, while central urban areas experienced comparatively little redevelopment because private landowners had no legal right to develop their properties. Urban development was undertaken almost exclusively by municipalities and state enterprises. Nevertheless, residents consistently preferred central and inner-city neighbourhoods because of their superior accessibility and services.

After private property rights were restored, investment rapidly shifted towards centrally located areas, where demand and land values were highest [9]. Construction activity accelerated dramatically, and between 2002 and 2007 the newly established private development sector generated an unprecedented building boom. In Sofia alone, the annual number of newly completed apartments increased from 651 in 2001 to 3,725 in 2008 [10, 11].

The boom was even stronger in tourism and recreational areas. Bulgaria's Black Sea coast and mountain resorts became among the most attractive real estate destinations in Europe, reaching a peak between 2006 and 2008 [12]. Along the Black Sea coast, residential construction expanded several times faster than in inland regions. Between 2002 and 2007, the annual number of newly completed dwellings per 1,000 inhabitants increased from 0.60 to 1.17 in inland regions, compared with 2.77 in Sofia and 8.46 along the Black Sea coast [1]. Similarly, the number of dwellings in buildings receiving construction permits was approximately ten times higher in tourism-oriented regions than elsewhere in the country.

Initially, these development processes were widely welcomed as evidence of economic recovery and successful market transition. However, public attitudes changed rapidly as their negative consequences became increasingly apparent [1, 4]. Residents, planners, and local authorities increasingly associated intensive development with the loss of open and green spaces, traffic congestion, urban heat island effects, noise, air pollution, overcrowding, and growing pressure on infrastructure and public services [13]. Consequently, urban overdevelopment became one of the most debated issues in Bulgarian urban policy.

The Bulgarian experience demonstrates that urban overdevelopment has two closely related but analytically distinct dimensions. The first is the exceptionally rapid pace of urban construction, while the second is the continuous increase in development density and intensity. Although these processes often occur simultaneously, they represent different dimensions of urban overdevelopment and should therefore be analysed separately.

Comparing the Trend of Urban Overdevelopment in Bulgaria to That in Other Countries

Similar trends towards urban overdevelopment have been observed in most post-socialist countries. Although their intensity and spatial characteristics differ, these countries followed comparable historical trajectories. During the socialist period, private initiative in urban development was severely restricted. Following the political and economic transition, private property rights were restored, land markets were liberalised, and private investment increased rapidly. As a result, many cities in Central and Eastern Europe experienced intensive redevelopment, particularly in central urban areas.

However, the Bulgarian case differs from that of most other post-socialist countries in one important respect. The exceptionally rapid expansion of tourism and recreation after 2000 generated an unprecedented demand for residential and holiday accommodation along the Black Sea coast and in mountain resorts. Consequently, urban overdevelopment became particularly visible not only in large cities but also in tourism-oriented territories.

By contrast, public debate in many Western European countries has focused primarily on urban sprawl [14-16] rather than on the intensive redevelopment of already urbanised areas. In countries such as the United Kingdom, Germany and the Netherlands, the principal planning concern has been the outward expansion of cities and housing policies [15, 17] and the associated consumption of land, natural areas and open space.

The comparison nevertheless reveals an important similarity. Although the spatial forms differ, both urban sprawl and intensive urban redevelopment result from strong demand for development and both may generate significant environmental, social and economic costs when development exceeds levels that are appropriate for the specific urban context.

Urban sprawl may therefore be regarded as a low-density form of urban overdevelopment. Viewing it in this way provides a useful basis for analysing high-density urban overdevelopment, which is the principal subject of this paper.

Finally, the comparison demonstrates that many European countries experience both high-density urban overdevelopment and low-density urban overdevelopment in the form of urban sprawl, although their relative importance differs considerably. Bulgaria is one such example. During the last decade, urban sprawl has become increasingly visible around the largest cities, while high-density urban overdevelopment within existing urban areas continues to represent the dominant form of development pressure.

WHAT IS URBAN OVERDEVELOPMENT?

Where is the Threshold Between Development and Overdevelopment?

As discussed in the Introduction, urban overdevelopment refers to a substantial, usually rapid, increase in built-up areas or development intensity within an urban area. The concept implies that development has exceeded an acceptable level: below this level development is beneficial, whereas beyond it its negative impacts outweigh its benefits.

Urban development is inherently beneficial because it provides the buildings and infrastructure required for economic and social activities. At the same time, it generates costs, inconveniences, and negative externalities. Beyond a certain level of density and intensity, these adverse effects begin to exceed the benefits, giving rise to urban overdevelopment [5, 9].

Development density and development intensity are therefore the principal indicators used to assess urban development. However, defining universally acceptable levels is problematic because appropriate densities depend on local physical, economic, social, and cultural conditions and evolve over time. A level of development considered entirely appropriate in a large metropolitan area may be excessive in a smaller town. Likewise, as discussed in the previous section, European countries often display different preferences for residential forms despite broadly similar cultural traditions [9, 18]. Consequently, no universal threshold can objectively distinguish development from urban overdevelopment.

High-Density versus Low-Density Urban Overdevelopment

A further argument against fixed thresholds concerns the environmental effects of different development patterns at different spatial scales.

At the neighbourhood scale, lower densities generally provide larger open spaces and greater opportunities for vegetation. At the metropolitan scale, however, they generate urban sprawl, extending urbanisation over much larger areas. Conversely, high-density development often produces greater local pressures through higher concentrations of residents, vehicles, and activities, but these impacts remain spatially more limited. At the metropolitan scale, compact development also generates substantial economic, social, and cultural benefits [19-21].

The close relationship between low-density development and urban sprawl therefore provides a strong argument for appropriately higher-density urban development. Urban sprawl is widely recognised as one of the least sustainable forms of urban growth because of its excessive land consumption, habitat fragmentation, dependence on private cars, high infrastructure costs, energy consumption, and greenhouse gas emissions [14-16]. Limiting urban sprawl has consequently become a central objective of sustainable spatial planning.

This comparison raises an important question: if low-density development is widely criticised because it generates urban sprawl, why is high-density development also regarded as problematic in Bulgaria? Can urban overdevelopment be meaningfully discussed if no universal technical thresholds exist?

Rather than a Technical Threshold, Urban Overdevelopment Is a Problem of the Institutional Context

Our answer to the questions raised is that urban overdevelopment does exist in Bulgaria, but its nature is more complex than the fixed technical standards. Appropriate development density and intensity are context-dependent and continuously changing. The real question is therefore not whether a universal threshold has been exceeded, but how socially acceptable levels of development should be determined.

We argue that the decisive criterion is the public interest. If the public considers that development has adversely affected its interests, this provides strong evidence that socially acceptable levels have been exceeded. Higher development densities and intensities continue to emerge because they serve the interests of landowners and developers, who possess stronger institutional capacity to influence both planning decisions and their implementation [9].

Urban overdevelopment therefore results not from exceeding a universal technical threshold but from an institutional imbalance in which particular interests are more successful than the wider public in influencing the allocation of development opportunities.

The problem is therefore not primarily technical but institutional. On this basis, we propose a more precise definition of the nature of urban overdevelopment, while also providing a clear answer to the question of whether urban overdevelopment exists in Bulgaria.

Urban overdevelopment does exist in Bulgaria, not because development density and intensity in many urban areas exceed predetermined technical thresholds, but because they exceed their socially optimal levels. By socially optimal levels we mean development density and intensity that, under the existing conditions, provide the most favourable balance between the benefits and the costs of urban development in accordance with the preferences of local residents. We identify the principal cause of these sub-optimal outcomes as a distorted urban development market. This market distortion creates an imbalance between private and public interests and, ultimately, leads to urban overdevelopment. A key element in the proper functioning of this market is the allocation of development rights, which is examined in the following section.

DEVELOPMENT RIGHTS AND THEIR ROLE IN URBAN DEVELOPMENT AND OVERDEVELOPMENT

Development Rights and Their Relationship to Urban Overdevelopment

As used in this paper, development rights refer to the amount of floor area that the local community permits to be constructed on an urban property through the development density and intensity specified in spatial plans in

accordance with planning legislation and municipal regulations. In this sense, development rights constitute one of the principal institutional resources of urban development.

The right to develop land has two distinct dimensions. The qualitative dimension forms part of land ownership and refers to the owner's legal entitlement to build unless that entitlement has been transferred to another person. In legal terminology, this is the right to build. Property law commonly describes ownership as a bundle of rights (or bundle of sticks), of which the right to build is one component.

The quantitative dimension, by contrast, concerns the amount of floor area that may legally be constructed—that is, the permitted development density and intensity. This dimension lies at the heart of urban overdevelopment. While greater development intensity generates substantial private benefits, beyond socially acceptable levels it imposes costs on the wider community that exceed the benefits society is willing to accept.

In practice, the distinction between the right to build and development rights is often overlooked because both are commonly assumed to belong to the landowner. However, this reasoning applies only to the right to build. As argued in the previous section, development density and intensity can only be established through the collective decisions embodied in spatial planning. Development rights are therefore created by the local community and, in this fundamental sense, belong to the community rather than exclusively to individual landowners. The following section examines why the original ownership of development rights is central to understanding urban overdevelopment.

The distinction is also reflected in different legal traditions. Common law has long recognised the separation of different property rights, largely through centuries of judicial decisions [22], whereas civil law systems have generally approached property rights within a more integrated statutory framework.

Our central argument is that urban overdevelopment results whenever development rights are defined or allocated inappropriately. When they disproportionately favour private landowners, the balance between private and public interests is distorted. The additional benefits of higher development intensity are appropriated privately, whereas the environmental degradation, infrastructure costs, and loss of urban quality are largely borne by the local community.

The importance of the Initial Allocation of Development Rights

Development rights can be fully understood only within the broader urban development mechanism.

The urban development mechanism is a system of interactions coordinated through planning and the market [23]. According to the Theory of Complex Property Rights (TCPR) [24], planning and markets are complementary components of a broader process of economic, spatial, social, and institutional development. Planning establishes the institutional framework within which markets operate by allocating rights and obligations among landowners, residents, developers, and other participants. These rights are subsequently exercised and exchanged through market transactions.

Development rights are among the most important elements of this property-rights system. Although urban development depends on many resources—including land, labour, construction materials, finance, and energy—development rights may be its most valuable institutional resource.

Their importance is illustrated by the concept of Residual Land Value, widely used in real estate valuation [25-27]:

$$\text{Residual Land Value} = \text{Gross Development Value} - (\text{Development Costs} + \text{Developer's Profit})$$

Since the maximum buildable floor area is determined directly by development rights, urban land value depends largely on the amount of development permitted by the planning system.

A simplified example illustrates this relationship. For a 1,000 m² site with a permitted floor-area ratio of 2.5, construction costs of €800 per m², a selling price of €2,000 per m², and a normal developer's profit of 25%, the residual land value equals approximately €1.75 million, or about €700 per m² of gross floor area. This represents approximately 35% of the completed property's market value, which is consistent with professional valuation practice.

These figures demonstrate that development rights are not merely a planning parameter but one of the principal sources of value in urban development. Their importance is also recognised in Bulgarian legislation, where the Local Taxes and Fees Act [28] values development rights at approximately 25% of the taxable value of completed buildings.

Given their considerable economic value, the efficiency of urban development depends fundamentally on how development rights are initially allocated and how the value they generate is distributed among landowners, developers, local authorities, and society.

DISCUSSION – DEVELOPMENT RIGHTS AND VALUE CAPTURE TOOLS TO CONTROL OVERDEVELOPMENT AND PROMOTE SUSTAINABILITY

The Original Ownership of Development Rights

As discussed in Section 4, the Theory of Complex Property Rights (TCPR) [24, 29] views property rights as the foundation of economic, social, environmental, and institutional relationships, including urban development. Within this framework, one of the principal functions of spatial planning is to establish the institutional rules governing urban development by defining and allocating property rights. The proper allocation of these rights is essential for the efficient functioning of markets and for maintaining an appropriate balance between private and public interests.

This section explains why, although the right to build belongs to the landowner, development rights follow a different institutional logic. They originate from the collective decisions of the local community regarding the amount of development permitted on each property.

According to TCPR, there are three fundamental reasons why development rights should, by their origin, belong to the local community rather than to individual landowners.

First, the institutional argument. Development rights are institutional arrangements created through municipal planning. Since they originate from collective planning decisions rather than private ownership of land, their original ownership belongs to the community that creates them.

Second, the fairness argument. Spatial planning is expected to balance the interests of all members of the community. Yet owners of land designated for high-intensity development receive substantially more development rights than owners of land designated for low-intensity development, despite both participating in the same planning system. The resulting imbalance requires compensation from the beneficiaries to those whose development opportunities are restricted.

Third, the responsibility argument. By adopting spatial plans, municipalities assume responsibility for providing the transport, technical, social, and green infrastructure required to support the permitted development. According to property-rights theory, the benefits generated by development rights should therefore accrue to the party that bears the corresponding responsibilities and costs.

Since the local community establishes the institutional conditions and provides the public resources necessary for creating development rights, it follows that the community is their original owner.

Allocating these rights to private landowners without appropriate compensation gives rise to three major institutional failures.

The first is a failure of fairness. Landowners receiving high-intensity development rights capture substantial windfalls [30], while owners of low-intensity land incur uncompensated wipeouts. At the same time, the local community bears the costs of environmental deterioration, infrastructure expansion, and declining urban quality.

The second is an economic failure. Municipal planning creates development rights but municipalities receive little of the value they generate. Instead, they inherit the costs of transport infrastructure, utilities, green infrastructure, schools, kindergartens, and other public services required by additional development, together with the costs of mitigating its environmental impacts.

The third is a failure of urban development. The inappropriate allocation of development rights directly encourages urban overdevelopment and its associated consequences, including environmental degradation, pollution, traffic congestion, urban heat islands, and the loss of open and green spaces.

Taken together, these three institutional failures demonstrate that the current allocation of development rights is not merely a legal or planning issue. It represents one of the principal institutional causes of urban overdevelopment.

Solutions to the Issues of Urban Overdevelopment: Market-Based Instruments

As argued in the previous sections, urban overdevelopment cannot be explained solely by planning deficiencies or strong market demand. More fundamentally, it reflects the way development rights are allocated and the incentives created by that allocation. Effective solutions therefore require institutional mechanisms that better align private incentives with the public interest.

Over recent decades, many countries have introduced Market-Based Instruments (MBIs) to improve both the efficiency and fairness of urban development. Unlike traditional regulatory instruments, MBIs use economic incentives while allowing markets to operate. In urban development, they are closely associated with Value Capture (VC) policies [31, 32], which recover part of the land value created by public actions—including planning decisions, infrastructure investments, and land-use regulations—and reinvest it in public infrastructure and environmental improvements.

International practice includes a wide range of instruments, such as betterment levies, development charges, developer obligations, transferable development rights (TDRs), land value taxation, and land readjustment. Although they differ in design, they pursue the same objective: ensuring that part of the value created through public decisions is returned to society. From the perspective of the Theory of Complex Property Rights, their principal role is not simply to generate public revenue but to improve the allocation of development rights, reduce market distortions, and strengthen the balance between private and public interests.

Among these instruments, Transferable Development Rights (TDRs) [23] are distinctive because they explicitly treat development rights as transferable property rights. By transferring development potential from areas where development should be restricted to areas where higher density is appropriate, TDRs reconcile private property rights with planning objectives while reducing reliance on direct regulation.

Ultimately, the choice of a particular instrument is less important than the underlying principle: planning systems should allocate development rights more equitably and recover an appropriate share of the publicly created value associated with those rights.

Policy Implications

The findings of this study suggest that urban overdevelopment should be understood primarily as an institutional rather than a purely technical planning problem. Consequently, effective planning requires not only regulatory controls but also institutional mechanisms that improve the allocation of development rights.

Traditional planning instruments—including zoning, floor-area ratios, height limits, and development density controls—remain essential. However, where development rights generate substantial private gains without corresponding obligations to society, regulation alone is unlikely to prevent urban overdevelopment.

Planning systems should therefore combine regulatory instruments with appropriate Market-Based Instruments that enable part of the publicly created land value to be reinvested in transport infrastructure, public facilities, green spaces, and environmental improvements. Although countries employ different combinations of such instruments, the underlying principle remains the same: development rights constitute a valuable public resource whose allocation should promote both economic efficiency and the public interest.

For Bulgaria, wider application of market-based instruments could reduce the imbalance between private development benefits and public costs, strengthen municipal finances, and encourage more sustainable urban development. Their success should ultimately be judged not by the revenues they generate, but by their ability to improve the allocation of development rights and thereby reduce the institutional causes of urban overdevelopment.

CONCLUSION

This paper examined the nature of urban overdevelopment in Bulgaria and explored the relationship between urban overdevelopment, development rights, and market-based instruments within the framework of the Theory of Complex Property Rights. The analysis demonstrates that urban overdevelopment should not be understood simply as a consequence of excessive development density or inadequate planning regulation. Rather, it is primarily an institutional phenomenon resulting from the inappropriate allocation of development rights and the resulting imbalance between private and public interests.

The paper argues that no universal technical thresholds can objectively distinguish acceptable urban density from urban overdevelopment. Appropriate levels of development depend on local conditions and on achieving a socially acceptable balance between the benefits and the costs of urban development. Consequently, urban overdevelopment

should be understood as the outcome of institutional arrangements that systematically encourage development beyond socially optimal levels.

Within this framework, development rights emerge as one of the principal institutional resources of urban development. Unlike the right to build, which forms part of land ownership, development rights originate from the collective decisions of the local community regarding the amount of development permitted on individual properties. Their allocation therefore has fundamental implications for the functioning of the urban development market, the distribution of development benefits and costs, and the balance between private and public interests.

The paper further argues that allocating development rights to private landowners without appropriate compensation to the local community creates institutional failures affecting fairness, economic efficiency, and urban development. Market-Based Instruments provide an effective means of addressing these failures by improving the allocation of development rights and enabling society to recover part of the publicly created value associated with urban development.

The principal contribution of this study is the proposition that the problem of urban overdevelopment should be addressed not only through better planning regulations but also through a more equitable institutional allocation of development rights. This perspective provides a new conceptual framework for understanding urban overdevelopment and suggests promising directions for future planning reforms in Bulgaria and in other countries facing similar development pressures.

REFERENCES

1. Anderson, R., Hirt, S., Slaev, A.D. Planning in market conditions: The performance of Bulgarian tourism planning during post-socialist transformation. *Journal of Architectural and Planning Research*, 29(4): 318-334; 2012.
2. Hirt, S. Suburbanizing Sofia: characteristics of post-socialist peri-urban change, *Urban Geography* 28(8): 755–780; 2007.
3. Hirt, S. Planning the post-communist city: Experiences from Sofia. *International Planning Studies*, 1 (3/4): 219-240; 2005.
4. Slaev, A.D., Nedović-Budić, Z., Krunić, N., Petrić, J., Daskalova, D. Suburbanization and sprawl in post-socialist Belgrade and Sofia. *European Planning Studies*, 26(7): 1389-1412; 2018. doi:10.1080/09654313.2018.1465530.
5. Stoyanova, Z. The Opportunities for Increasing the Ecological Potential in Bulgaria. *Trakia Journal of Sciences*, 23(2): 409-413; 2025.
6. Stanilov, K. (Ed.). *The Post-Socialist City: Urban Form and Space Transformations in Central and Eastern Europe after Socialism*. Springer 2007.
7. Daskalova, D., Slaev, A.D. Diversity in the suburbs: Socio-spatial segregation and mix in post-socialist Sofia. *Habitat International* 50, 42-50; 2015. doi:10.1016/j.habitatint.2015.07.007
8. Ivanov, V., Simov, O., Asparuhov, A. Urban and Architectural Approaches for Higher Energy Efficiency in the Residential City Structures. *Annual of the University of Architecture, Civil Engineering and Geodesy – Sofia*, 50(2): 59-72; 2017.
9. Slaev, A.D., Hirt, S. Planning, Pluralism, Markets: Experiences from Post-Socialist Varna, *Planning Theory & Practice*, 23:3, 461-475; 2022. doi:10.1080/14649357.2022.2061774
10. National Statistical Institute (NSI) Sofia in figures 2009. Sofia: National Statistical Institute; 2009.
11. National Statistical Institute (NSI) Census 2011- Population and Housing Fund, Volume 3, Book 23 Sofia (Capital). Sofia: National Statistical Institute; 2012.
12. National Statistical Institute (NSI) (2020) <https://www.nsi.bg/en/statistical-data/414/927>. Accessed March 2, 2020.
13. Slaev, A.D., Nikiforov, I. Factors of Urban Sprawl in Bulgaria. *SPATIUM* 29: 22-29; 2013.
14. Nechyba, T. J., & Walsh, R. P. Urban sprawl. *Journal of Economic Perspectives*, 18(4), 177–200; 2004.
15. Couch, C., Leontidou, L., & Petschel-Held, G. (Eds.). *Urban Sprawl in Europe: Landscapes, Land-Use Change and Policy*. Blackwell Publishing; 2007.
16. Oueslati, W., Alvanides, S., & Garrod, G. Determinants of urban sprawl in European cities. *Urban Studies*, 52(9), 1594–1614; 2015.

17. Shahab, S., Hartmann, T., & Jonkman, A. Strategies of municipal land policies: housing development in Germany, Belgium, and Netherlands. *European Planning Studies*, 29(6), 1132–1150; 2020. doi:10.1080/09654313.2020.1817867.
18. Bertaud, A. *Order without Design. How Markets Shape Cities*. Cambridge: MIT press; 2018.
19. Jacobs, J. (1969). *The Economy of Cities*. Random House.
20. Jenks M, Burton E, Williams K, **editors**. *The Compact City: A Sustainable Urban Form?* London: E & FN Spon; 1996.
21. Glaeser, E. L. *Triumph of the City*. Penguin Press; 2011.
22. Coase, R.H. The problem of social cost. *Journal of Law and Economics* 3: 1-44; 1960.
23. Shahab, S., Clinch, J. P., O'Neill, E. Impact-based planning evaluation: Advancing normative criteria for policy analysis. *Environment and Planning B*, 46(3), 534-550; 2017. doi:10.1177/2399808317720446.
24. Slaev, A.D., Shahab, S. *A Theory of Complex Property Rights: Institutions for Governing Natural and Built Environments*. Cheltenham, UK: Edward Elgar Publishing; 2026.
25. Isaac, D., & O'Leary, J. *Property valuation principles*. Palgrave Macmillan; 2000.
26. Peiser, R. B., & Hamilton, D. *Professional real estate development: The ULI guide to the business* (3rd ed.). Urban Land Institute; 2012.
27. Royal Institution of Chartered Surveyors (RICS). *Valuation of development property* (1st ed., RICS Professional Standard). Royal Institution of Chartered Surveyors; 2019.
28. National Assembly of Bulgaria. *Local Taxes and Fees Act*; 1998.
29. Slaev, A.D. Complex private-common property rights in institutional and planning theories. *Planning Theory* 19(2) 193–213, doi:10.1177/1473095219874832; 2020.
30. Alterman R Land use regulations and property values: The 'Windfalls Capture' idea revisited. In: Nancy Brooks, Kieran Donaghy, and Gerrit-Jan Knaap, eds. *The Oxford Handbook of Urban Economics and Planning*; 2012.
31. Shahab, S., Clinch, J.P., O'Neill, E. Accounting for transaction costs in planning policy evaluation. *Land Use Policy*, 70, 263-272; 2018.
32. Shahab, S., Viallon, F.X. Swiss land improvement syndicates: 'Impure' Coasian solutions? *Planning Theory* 20(1), 44–62; 2021.