

Land-Property Complex of Saint-Petersburg and Its Development in Present Situation

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Abstract

Today state and development of land-property complex of Saint-Petersburg that is number 2 city of Russia and one of the greatest cities of the Europe has been reviewed in the article. Trends and problems of development of land-property complex of Saint-Petersburg have been revealed, measures to increase efficiency of its utilization in today situation have been defined. Definition of the concept of land-property complex has been provided together with data on land structure of Saint-Petersburg and its dynamics in last decade. Changes in land property forms, volume and structure of nonresidential property by building types have been shown. Disproportions in spatial and territorial structure of the city, problems of effective use of city land and other realty and differences in land tenure and development compared with global trends have been revealed as a result of analysis. High priority activities necessary to increase efficiency of land-property utilization have been defined.

Keywords: land-property complex, Saint-Petersburg, spatial and territorial structure, disproportions, problems, trends, development strategies

1. Introduction

Land-property relations are the base of any social and economic system because land, buildings, constructions is spatial and material foundation of economic activity and social development. That is why scientists of many countries pay much attention to research of land tenure, to forming and development of territorial land-property complexes. Foreign researches point out the growth of city land utilization efficiency (Wu, Zhang, Skitmore, Song, & Hui, 2014) and expansion of domestic buildings to suburban zones (Liu, Yue, Fan, & Song, 2015). Other works deal with the problems of optimization of ratio of government control to market development mechanisms in development of land-property relations and real estate market (Alexander, 2014; Qian, 2010). These are pressing problems for Russian megalopolises among which Saint-Petersburg has a special place.

Saint-Petersburg is thought of as a second capital of Russia, it has special historical and cultural importance not only in national but in global scope. Radical economic reforms of 1990s have affected its spatial and territorial development. These reforms caused transformation of land property relations and other estate and land tenure rules changes.

In addition to special role in economy and social life of Russia, Saint-Petersburg is one of the greatest cities of Europe by population that equals now 5 131 942 people (Federal State Statistic Service, 2014). It is larger than such cities as Paris, Rome, Madrid, Berlin. Saint-Petersburg is first city of Europe by population that is not a capital of the country. That is why problems of territorial and spatial development of the city in the context of efficiency of land-property relations have great scientific and practical interest.

2. Research Method

Complex of approaches, methods and means of scientific research have been applied in present research.

2.1 Methodology and Methods of Research

Complex and system approach, works of Russian and foreign economists, scientists that work in land tenure study, legal and economic regulation of land relations and managing objects of land-property complexes are

theoretical and methodological base of this research. Such methods as analysis, synthesis, analytical method, system analysis technique, retrospective, graphical and statistic analysis method were applied in research. Application of these methods in complex allowed analyzing studied phenomena in their relationship and in development. Analysis of the term “land-property complex” was starting point of the research. Term “land-property complex” became popular in scientific area and in practice but there is no common approach to definition of the essence of this concept. Legislation in force of Russia does not define this concept too. Still such definition is required due to the role land-property complexes play in development of the country, regions, cities and other territories. Present analysis resulted in author interpretation of the concept “land-property complex” and further research was based on this definition.

2.2 Content of “Land-Property Complex” Concept

Different points of view on the essence of the concept “land-property complex” are presented in scientific literature. According to one of the approaches land-property complex should be viewed from the point of view of administrative division of a territory and thus separate land-property complex of Russian Federation, subject of Russian Federation, municipal entity. For example, in one of the works land-property complex of a subject of Russian Federation and municipal entity are defined as “an aggregate of land resources, other estate and other relative resources being the property of a subject of Russian Federation” (Khametov, 2009).

According to many authors land-property complex is based on physical aggregate of an object of a property and land parcel. For example, Bondarenko S. I. Defines it as “an aggregate of land parcel with other property placed on it, infrastructure objects relating to their usage by functionality, isolation and alienation” (Bondarenko, 2012). Sai S.I. considers land-property complex “as an aggregate of estate objects, unified by common territory” (Sai, 2001).

Some Russian authors also stress legal dimension of this concept. Land-property complex is defined as “an object of property interest, aggregate of land and estate objects placed on it with a certain functionality, belonging to a certain legal (natural) person” (Khametov, 2009); as “an aggregate of rights on estate objects an(or) improvements with legal rights on land parcel they are placed on and joined by common aim of functioning and development” (Bondarenko, 2012).

According to authors of the book on managing of land resources two components of land-property complex may be separated: “land as spatial, social and economic concept of existing of a nation and state and the concept of “property” as social and political idea that defines the volume of interests and obligations of different legal entities in relation to legal real estate” (Kukhtin, Levov, Lobanov, & Semina, 2005).

Considering opinions presented in scientific literature we may note that administrative and legal interpretation of the idea of “land-property complex” are overstressed with prejudice to economic and managerial approach. Undoubtedly legal component is important considering possibilities of this or that subject (owner, administrative and territorial entity) to make decisions on disposal, alienation, etc. of land-property complexes. Still it is not less important to understand that land-property complex is not just a set of land parcels and land parcels that belongs to a certain territory. It is integral entity represented by a part of a territory of a land with land parcels on it, buildings and constructions that mutually complement each other and that are united by common destination, functional and infrastructure unity. This integrity allows viewing land-property complexes as integral object of reproduction and management. Territorial land-property complexes viewed in different levels of land-property hierarchy (country, region, settlement) act as a systems consisting of relatively autonomous but interrelated elements (subsystems). Primary cell of such systems (basic level system) is real estate object that is an integral entity consisting of land parcel and its improvements (buildings, constructions).

System approach to understanding of territorial and property complexes of settlements including big ones such as Saint-Petersburg presupposes that all decisions concerning their separate subsystems (for example, land-property complexes of industrial enterprises, residential development districts, etc.) should be made with regard to their internal and external relations in the context of development of all land-property complex of a city. The most important condition of grounded decision making is understanding of today state and existing trends of development of land-property complex of Saint-Petersburg.

Development of land-property complexes of various purposes is done in relation with purpose (category) and approved land tenure. Seven categories of lands assigned by purpose are separated in Land Code of Russian Federation: agricultural holdings; urban lands; industrial, power industry, transportation, communication, radio broadcasting, TV, computing lands, lands for provisioning space industry, defense lands, security provisioning lands and lands of other special purposes lands; lands of specially protected areas and objects; lands of forest

resources; lands of water resources; reserve lands. Land-property complex of Saint-Petersburg is located on urban lands provided for development and growth of the city.

Land-property complex of Saint-Petersburg may be defined with regard to these facts as system aggregate of intra-urban land-property complexes of different functionality, located on land parcels that relate to residential, social and business, recreational, engineering and transportation infrastructure zones, agricultural lands, special purpose lands, lands of defense objects and other territorial zones.

3. Results

3.1 Analysis of Land-Property Complex of Saint-Petersburg Structure

Total area of Saint-Petersburg in administrative boundaries is 140.3 thousand hectare. Being one of the biggest cities of Europe by territory (after Moscow and London) it has significantly lower population density that is 3566 (Moscow – 4823 people per 1 square km, London - 5173 people per 1 square km) and has free territories for development and growth of intra-city land-property complexes. At the same time existing structure of city's land are being underutilized according to Table 1.

Table 1. Structure of land-property complex of Saint-Petersburg by land types

#	Land types	01.01.2003		01.01.2010		01.01.2014
		Area, thousand hectare	Area, %	Area, thousand hectare	Area, %	Area, thousand hectare
1.	Residential development lands			9.7	6.9	11.9
2.	Lands of social and office development	20.4	14.6	12.5	8.9	15
3.	Industrial lands	17.7	12.7	19	13.6	16.1
4.	Shared lands	12.5	8.9	12.6	9	10
5.	Transportation, communication, facilities lands	8.7	6.2	6.8	4.9	8.2
6.	Agricultural holdings	28.6	20.4	28.9	20.6	29
7.	Lands of specially protected areas and objects	30.5	21.8	33.1	23.7	32.3
8.	Water resources lands	5.3	3.8	5.3	3.8	5.3
9.	Defense and other regime objects' lands	6.3	4.5	7.7	5.5	7.7
10.	Other special purpose objects' lands	1.5	1.1	1.3	1	2.8
11.	Lands not used in town development and other economic activity	8.4	6	3	2.1	2
	Total	139.9	100	139.9	100	140.3

Land of specially protected territories and objects and agricultural lands has the greatest share in the structure of land-property complex of Saint-Petersburg now, 23% and 20.7%, respectively. These shares have reduces in last decade but they are still substantial. It is obvious that perspectives of these territories are different. Share of agricultural lands will be reducing under the pressure of urban development and this trend should be considered normal. At the same time share of lands of specially protected territories may be reducing compared with other lands but these area as they are should be preserved at large. Legal order of using these lands should be preserved too. It is specifics and problem of development of land-property complex of the city.

According to statistical data (see Table 1) the share of residential lands and lands for social and business purposes growth by 4.6% in 2003-2014, the share of industrial lands has reduced from 12.7% to 11.5%. The share of water resources remains the same. The share of lands out of land turnover has reduced significantly (4.2 times). In practice these changes are greater because a number of industrial territories in downtown are not in fact industrial, but this fact is not reflected in statistical data.

In general the following trends should be mentioned:

- forming new land-property complexes mainly residential and social and business lands by active usage in urban development free lands and changing specialty of industrial lands;
- trend on preserving historical look of the city, architectural complexes that relate to specially protected land-property complexes;
- transformation of territorial and spatial structure of the city by expansion of area under urban development due to usage of former agricultural lands and transformation of formerly developed lands;
- expansion of actual city boundaries by active urban development on territories that are not administrative territories of Saint-Petersburg.

It should be notes that problems of optimizing urban lands structure, intensifying land usage in cities, drawing if investments and using of industrial lands are typical for other countries (Rossi-Hansberg, 2004; Wang, Antipova, & Porta, 2011; Wu, Zhang, Skitmore, Song, & Hui, 2014).

3.2 Disproportions of Spatial and Territorial Structure of the City

Modern urban look is being forming in Saint-Petersburg now but the same time disproportions in spatial and territorial structure of the city are growing. More than a half of land-property complexes with work places of the citizens are located on a quarter of the territory. Disproportions in location of work places and dwellings of working people cause increase in daily migration flows “downtown – peripheral districts”.

Concentration of social and business, educational, tourist, cultural and entertaining objects in downtown causes its transport overloading while great spaces in peripheral districts lack these objects. Excessive intensity of land usage and building density in downtowns is typical for cities of foreign countries too (Wang, Antipova, & Porta, 2011; Munneke, 2005; Kärholm, Nylund, & Paulina Prieto de la Fuente, 2014).

Structure of land-property complex of Saint-Petersburg by development types is presented in Figure 1.

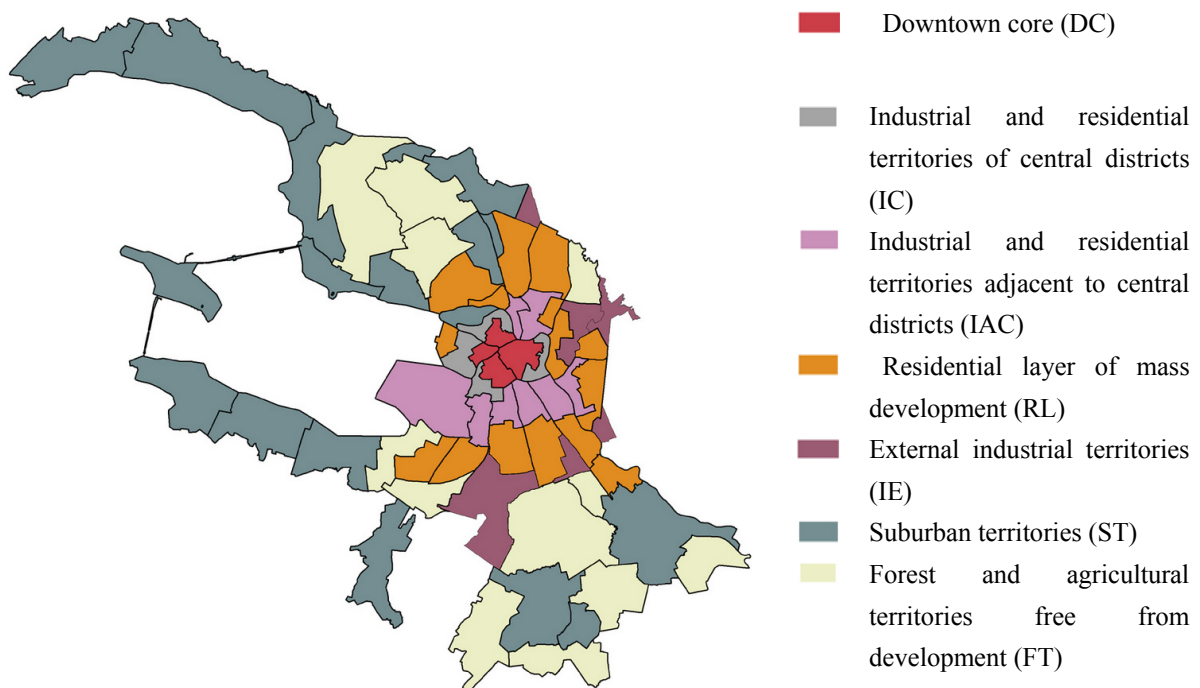


Figure 1. Types of development in Saint-Petersburg

Historical center of the city and “internal city” are surrounded by the ring of industrial zones. Many districts in historical center of the city require renovation. 85% of all shared apartments (about 90 thousand of apartments) are in “internal city”; 62% of buildings are worn-out. There are no bathtubs, about a thousand buildings have wooden ceilings.

Ring of industrial zones take 11% of the city territory. Equipment is worn-out up to 70%. Many of these enterprises do not work in their core business and just occupy “valuable” territories reducing price of city land.

Most buildings in the territory of mass development are obsolescent; possibilities of changing functionality of existing space are limited due to overall development.

Many territories used for development of new residential complexes in the city territory have no necessary facilities and transport infrastructure and power resources of some districts are almost exhausted.

Besides, the city has some characteristics typical for post-Soviet cities:

- 1) vast territories with high density of development with panel buildings in peripheral city districts;
- 2) excessive share of industrial development in zones adjacent to historical center;
- 3) underdeveloped commerce and services in center;
- 4) underdeveloped transport infrastructure, improper maintenance of transport;
- 5) problems with property rights and irregular structure of land property in central zone that hamper its prompt change to comply today requirements.

Global trends in city lands usage and some parameters of land-property complex of Saint-Petersburg are compared in Table 2.

Table 2. Differences in land usage in cities

Parameters	Global trends	Saint-Petersburg
Industrial development share	5-8%	12%
Share of lands for transportation infrastructure	20%	5 %
Network of streets density	10-15 km/square km	3.8 km/square km
Development density	Reducing from center to periphery	Reducing from periphery to center

According to these parameters situation in Saint-Petersburg is notably different from global trends (Liu & Lin, 2014; Henderson, 2011). It concerns in the first place the problem of transport infrastructure. It requires large-scale decisions about the usage of land-property complex of Saint-Petersburg as a whole (Lascano Kezič & Durango-Cohen, 2012).

It should be noted that development of the city is going on in worse economic conditions than in the period before crisis (greatest figures of economic growth were reached in 2004-2007). Today situation is characterized by reduction of federal budget and own revenue due to changes in territorial distribution of taxes of the biggest companies.

3.3 Development of Land and Other Real Estate Property Forms

Processes of privatization and changing of property forms impacted land-property complex of Saint-Petersburg. Intensity of privatization of land parcels and other real estate (buildings, constructions, premises) is significantly different. It resulted in emerging of land-property complexes with different land and building property rights when a building is in property of one subject and land parcel is a property of the other. This situation does not stimulate drawing of investments in development of such land-property complexes and make taxation and managing more complicated.

Dynamics of changing ok land property forms in Saint-Petersburg is presented in Table 1 and Figure 1.

Table 2. Saint-Petersburg land structure by property forms

Years	State and municipal, %%	Property of citizens, %%
2003	87.6	1.7
2004	87.0	2.0
2005	87.0	2.0
2006	85.5	2.5
2007	84.0	3.0
2008	83.0	3.0
2009	83.1	3.4
2010	82.7	3.8
2011	82.0	4.0
2012	80.0	5.7
2013	76.7	6.4

Dynamics of land property forms changing in the city is presented in Figure 1.

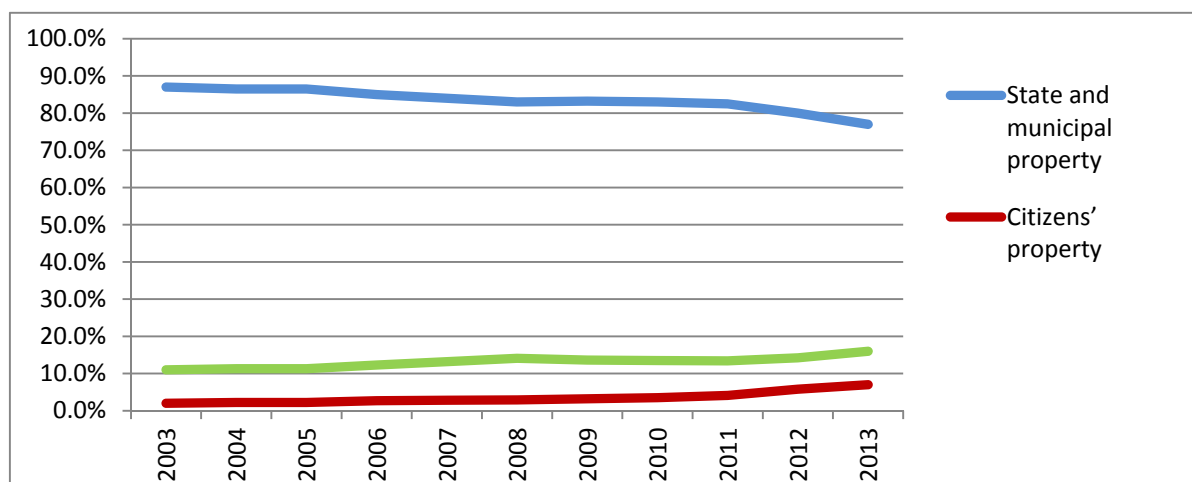


Figure 1. Changes in land structure of Saint-Petersburg by property forms

Share of lands in private property in Saint-Petersburg is growing, but the greatest share of lands is still lands in property of state (77%). Land parcels for individual residential development (59%), part-time farming (27%), buildings of country houses (6%) as well as redeemed for commercial purposes (3%) and other purposes (5%) are in private property. Lands owned by agricultural enterprises (85%), land parcels redeemed by private non-agricultural enterprises (13%), common use lands in non-profit communities of citizens, including lands occupied by tenement houses (2%) are lands owned by legal entities (Peterburg in figures, 2012).

Buildings property forms is another. According to Rosstat, 85.7% of all residential resources are in private property. 81.4% of this property are citizens' property and 14.3% are in the property of the state (Social and economic indicators, 2013). Data of nonresidential resources are provided in Table 3, compiled from the source (Peterburg in figures, 2012).

Table 3. Nonresidential resources of Saint-Petersburg by building types

#	Building type	Total floor, thousand square m	Share, %
1	Point of sales	5775.9	7
2	Industrial	27336.9	33.2
3	Warehouse	6915.6	8.4
4	Homehold services	954.8	1.2
5	Garages	1918.2	2.3
6	Office	11352.7	13.8
7	Public catering	664.2	0.8
8	School	4298.8	5.2
9	Educational and scientific	4344.4	5.3
10	Medical and sanitary	4533.3	5.5
11	Cultural and educational	1760.2	2.1
12	Kindergarten and day nursery	1987.7	2.4
13	Theatres and entertaining	485.6	0.6
14	Art schools	79.3	0.1
15	Trade schools	919.9	1.1
16	Communication and ATE	485.7	0.6
17	Hotels	1282.3	1.6
18	Resorts and camping	157.8	0.2
19	Public transport	147.3	0.2
20	Boarding schools	250.2	0.3
21	Other	6721.6	8.1
	Total	82372.4	100

Industrial buildings have the greatest share in nonresidential resources of the city (33.2%), followed by offices (13.8%), warehouses (8.4%), points of sales (7%). Other types of buildings have insignificant share – from 0.1 to 5.55%. Most part of buildings is located in peripheral districts of the city – Nevski, Kolpinski, Vyborgski, Kirovski, Kalininski, Krasnogvardeiski. About 30% of all buildings are located in central part of the city.

Structure of nonresidential resources of the city by users is the following: state authorities and industry – 55.3%, private persons – 27.4%, department of the city government – 17%, mixed property – 0.3% (Peterburg in figures, 2012).

This data highlight disproportions in property rights on land parcels and buildings located on them that makes managing of such object as common land-property complex complicated.

4. Discussion of Measures of Improvement of Efficiency of Usage of Land-Property Complex of Saint-Petersburg

Buildings and lands property rights should be balanced. For example, it is necessary to form legal land-property complexes in residential area of the city by support of the process of official registration of land parcels of apartment houses to the property of citizens who are owners of apartments in these houses. Processes of official registration of rights on lands of privatized enterprises should be promoted too.

Balanced development of land-property complex of Saint-Petersburg presupposes provisioning territories for development of necessary infrastructure, complete elimination of compacting building and transfer to complex development of territories.

Existing system of property record also affects efficiency of usage of land-property complex of Saint-Petersburg because it does not allow getting full actual information about all land parcels and buildings on them out of single information system. This information is distributed over different sources and often does not coincide. It is only fair to say that the process of forming united state information resource of real estate has been already launched (Federal Law of RF, 2014) but yet only a small part of required information is contained in it. Joining of three departments – Rosregistratsia, Rosnedvizhimost and Roskartografia – had been required to form real estate cadastre. Information systems of these departments that were highly diverse and have no common communication network and postal services were also unified. Classified information on a number of activities was unavailable. To form real estate cadastre it would be necessary to join different information, link resources, fix errors and develop relevant normative documentation, etc.

On Development of Common State System of Property Rights Registration and Cadastre Recording of Real Estate (2014-2019) Federal Target Program was approved in October 2013. One of target indicators of progress of this program is share of real estate objects recorded in state cadastre of real estate, Common state register of rights on real estate and contracts with it. In 2012 this indicator was 7.2%, 8% has been planned on 2014, complete registration) (100%) has been planned on 2019 (Government of RF Order, 2013). Fulfillment of tasks of the Program allows provisioning comprehensive reliable spatial and statistical data on real estate objects that form the basis of effective decision making in managing land-property complex of Saint-Petersburg and other cities and regions of Russia.

Strategy of Economic and Social Development of Saint-Petersburg until 2030 was approved in May 2014. For the first time it contains chapter on development of city territories with regard on their scope, specialty, development perspectives (Saint-Petersburg Government Order, 2014). The fact of understanding of importance of this problem and including it in the list of strategic tasks of the city is inspiring by itself. But it is not enough. It is necessary to carry out complex of measures of administrative and organizational, economic and social character focused on improvement of efficiency of land-property complex of the city usage with regard to territorial and economic zones and balance of city territory development as a whole.

Adjustment of documents of town planning regulation (General layout, Land tenure and development rules, Territorial town planning norms) is a part of these measures with regard to trends of development of territorial and economic zones of the city; improvement of manageability of social and economic development of territories of the city by changing administrative and territorial structure of Saint-Petersburg; fulfillment of selective policy on support of business and investment activity with application of tax and other instruments considering specifics of each of territorial and economic zone.

5. Conclusion

Land-property complex of Saint-Petersburg should be viewed as complicated system the development of which is being affected by totality of internal and external factors such as changed on geopolitical and geo-economical

situation of the city, distribution of economic and social activity on city territory, social and economic factors and first of all transformations in structure of land-property resources, etc.

Land-property complex of the city should be viewed as the system comprised of land-property complexes of lower level as subsystems. It presupposes that any decisions regarding separate objects of real estate as elementary land-property complexes and separate territories should be made with regard of their impact on functioning and development of land-property complex of the city as a whole.

Carrying out of active territorial policy by authority bodies of the city using existing administrative and organizational tools is necessary conditions of improvement of the balance in development of city territory.

In the scope of the present article authors do not touch the problem of optimization of the ratio of state regulatory agencies and market instruments of land-property complexes development of post-Soviet cities and the effect of this ratio of efficiency of land tenure and territorial and spatial development. It may be a subject of further research.

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