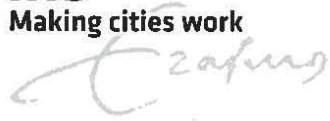


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Thesis

Title: System of selling development rights as a land value capture instrument, and its possibilities to finance infrastructure. Case study - Tbilisi, Georgia

Name Otar Nemsadze

Supervisor: Carlos Morales-Schechinger, MPhil

Specialization: Land Development Strategies

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System of selling development rights as land value capture instrument, and its possibilities to finance infrastructure. Case study - Tbilisi, Georgia

Otar Nemsadze
Georgia

Supervisor: Carlos Morales-Schechinger, MPhil

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Summary

The goal of this research was to study one of the land value capture instruments called “Selling the Development Rights” in capital city of Georgia - Tbilisi. Objective was to identify if the instrument is capable to increase the revenue source for local government and help them finance infrastructure. In order to answer this question, three perspectives were identified and examined in study’s sub questions: (1) legal, (2) market and (3) administrative.

In this research the qualitative method was utilized which considered collecting primary and secondary data within which primary data consisted of fifteen interviews with different stakeholders such as Local Government officials, member of Tbilisi City Assembly, lawyer, developers and urban planning experts. Additionally, one observation of the commission responsible for approving extra development rights was undertaken. Moreover, secondary data administered various documents including Constitution of Georgia, Civil Code, the Constitutional Court Judgments, different regulations, budget of the Tbilisi city through years 2008-2012, databases of over eight thousand building permits and over four hundred cases which demanded for additional construction area.

The main result of this study is that, it revealed existence of problems while administering the land value capture instrument, such as: the existence of alternative, in this case free way of getting extra density, low capacity of local municipality to collect the revenue, large amount of exemptions within the instrument leading to inefficient revenue generation and flexibility for developers, complex regulation with not clearly stated formula for calculating fee for additional construction area, unclear decision making process and no consideration of impact of extra density on infrastructure. Furthermore, huge gap was identified through comparison of revenue generated by selling the development rights to total expenditure on infrastructure in years 2008-2012. Overall development rights could have contributed to only one percent of expenditure on infrastructure and less than one percent to total revenue of the budget. Same comparison with property tax also revealed the gap but same time indicated that this land value capture instrument was more efficient (it could have financed nearly fifty percent of the whole expenditure on infrastructure) in comparison years than selling the development rights. On the other hand, both of these instruments showed that they are capable to finance specific sectors of infrastructure. In case of development rights only one (drainage rehabilitation) sector and in case of property tax all three (road rehabilitation, city lighting network and drainage rehabilitation) sectors that in this research were used for comparison. Analysis made it possible to conclude that in existing situation selling the development rights are not capable to significantly increase the revenue for local government as well as it could have financed only one specific sector of infrastructure.

Finally, the research made the recommendations which are related to regulation, revenue collection procedures and administrative and market issues in order to assist local government for making studied instrument more efficient so that it can become for them one of the ways to more effectively increase the revenue and cover the costs for infrastructure.

Keywords: Tbilisi, Land Value Capture, Development rights, Trading with Rights, Financing Infrastructure

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Abbreviations

CVM:	Comissao de Valores Mobiliarios
DDR:	Donation of Development Rights
DR:	Development Rights
DRP:	Development Regulation Plan
EDROP:	Exchanging Development Rights for Other Property
EMURB:	Empresa Municipal de Urbanizacao
EUR:	Euro
FAR:	Floor Area Ratio
GEL:	Georgian Lari
K1:	Development coefficient of land parcel
K2:	Development intensity coefficient of land plot
K3:	Greenery Coefficient
LG:	Local Government
LVC:	Land Value Capture
M²:	Square Meter
OODC:	Outorga Onerosa de Dirieto de Construir
PDR:	Purchase of Development Rights
PLD:	Plafond Legal de la Densite
PPP:	Public Private Partnership
SDR:	Selling the Development Rights
Sq.M.:	Square meter
SZP:	Special Zonal Permits
TDR:	Transfer the Development Rights
UO:	Urban Operation
USA:	United States of America
USD:	United States Dollar

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Chapter 1: Introduction

1.1 Background

Tradable rights have become an issue in various countries around the world in recent years. Right to trade was also used in the context of climate change (Renard 2007). In 1997 after adopting Kyoto protocol, countries agreed to trade with the quotas to pollute. Tradable development rights which are related with the land, have to deal with property rights and rights to develop extra in certain areas.

Country of France was the earliest example revealed in literature that experienced trading with development rights. “Plafond Legal de Densite” (PLD), introduced in 1975, restricted landowners to build at certain density and in case owners wanted to build over specified floor area ratio, they had to pay a fee (Aveline 1997). System of trading with development rights varies from country to county. They can be sold by municipality (SDR), transferred between owners of two different areas (TDR), purchased (PDR), donated (DDR), exchanged or leased. The method that United States is using is transferring the development rights. Concept of TDRs In USA is used to preserve the areas by decreasing development rights (this areas are established by the community and are called sending sites) and transfer them to the areas where growth is needed (called receiving areas) (Pruetz, Standridge 2008).

Brazil has different approach. “Outorga Onerosa de Dirieto de Construir” (“OODC”) or “Cepacs” (Certificate of additional construction potential) valid from 2004 (Sandroni 2010). “Cepacs” refers to bonds that are sold by the municipalities through electronic auctions and give the buyer the opportunity to develop more densities in certain areas, by increasing floor area ratios (FAR) and, through this system, local government gains the opportunity to finance the infrastructure.

This study will analyze the international experience in this area, studying various systems that deal with the trade. Afterwards, it will focus than on the case of Tbilisi and will try to analyze value capture instrument (selling of the development rights) and see whether introducing this system in the capital city of Georgia is effective for achieving the specified goals.

1.2 Problem statement

Tbilisi is the capital city of Georgia, country located in Eastern Europe, with the population of 1 172.7 thousand people (National Statistics Office of Georgia 2012). Local government is administratively decentralized as the Mayor and the Tbilisi Assembly are elected through direct elections. But on the other hand administration still struggles to achieve fiscal decentralization. Big part of the city budget is dependent on the transfers and the grants from Central Government of the Georgia.

Local Governments around the world are in the search of effective tools in order to capture value increment and to invest it in providing the services (Peterson 2009). Tbilisi is not an exemption. In 2007, Tbilisi City Assembly made a decision to establish new regulation (Resolution N7 – 41; On Approval of the Instructions on Determination and payment of Rates of Fee for Issue of Special (Zonal) Permits in the territory of Tbilisi; July 2007) with the objective to increase the revenue source for the budget.

One of the main goals set forth by the municipality, for recent years, is to invest in providing or upgrading the infrastructure in the city. Above mentioned instrument gives local government a chance to sell extra development rights to the developers, who in return get possibility to densify the certain areas. But even after 5 years since introducing the regulation, budget of the capital city still has constraints and is still dependant on transfers.

Figure 1.1: Location of Tbilisi



1.3 Objective of the study and main research question

While promoting new decision, the local government's key goal was to raise the revenue and at the same time increase fiscal decentralization. The main objective of the research is to analyze the system of tradable development rights in Tbilisi and answer key question of the study:

- **Can selling of development rights increase the revenue source for the local government so that it can help finance infrastructure?**

1.4 Research sub-questions

In order to understand and answer the main research question, several issues have to be considered, such as legal and market issues, how it is implemented and finally whether the income generated from selling the development rights can help governments to finance the infrastructure.

The focus on legal perspective will be drawn to understand if it is possible or not to sell the development rights from legal perspective. Sub questions referring this issue are formulated as follows:

- 1. What are the property rights and does it include the right to develop?**
- 2. Can the development rights be separated from property rights and treated individually?**

Market is another perspective that needs to be focused. Similarly to legal issues we will try to understand if trading with the development rights is possible from market perspective. Also in this case two sub questions will be considered:

- 3. Do the development rights have a value?**
- 4. Does selling them raise enough income to finance the infrastructure?**

There are different systems regarding marketing with the development rights. It is important that system is well implemented in order to achieve the goals. We will also focus on implementation and answer a question:

- 5. What is the process, how land price is determined and how it is captured?**

And finally, the question we would like to answer is:

- 6. To what extent do land value capture instruments compliment financing the infrastructure?**

1.5 Significance of the study

The study can contribute to better understanding of the system, help to develop the policy, improve existing system by making it more efficient. The research will also look at international experience and analyze how it is done in different parts of the world. Besides, Georgia is surrounded by four countries (Russia, Turkey, Armenia and Azerbaijan) where the concept of land value capture instruments¹, are not yet implemented. It can become the issue in few years, and Tbilisi can become good learning example for them.

Better understanding of land value capture instruments and other issues related with the land is important to know as it can work for the benefit for the balanced urban development. It can help also to start working with municipality of Tbilisi with the objective to improve existing situation and to promote ideas which will be considered in this research.

Tbilisi can also become an example for other regions of Georgia where most of the development is concentrated. Especially now, when central Government of Georgia decided to build new city near the black sea and knowledge of land value capture instruments will be very useful to understand the possibilities of how the government can benefit from the system.

1.6 Scope of the research

As in this study we focus on the trading with development rights, it will cover three perspectives which are important for the instrument to be efficient. As we already mentioned in section 1.4, research will include legal, market and implementation perspectives. In this research we also consider how density decreases the costs of infrastructure, but it is important to notice that we will not measure mentioned impact.

¹ Other than property tax or regulations, that obliges developers to provide the infrastructure.

Chapter 2: Theoretical Framework

In this Chapter we will focus on three perspectives which are relevant to trading with development rights. First we discuss the legal issues, then focus on market and finally discuss implementation process.

2.1 Legal perspective - Property rights

“Property – thing or things owned.” Oxford Paperback Dictionary, Oxford University pres.

According to the ancient philosophical thoughts, nature of the universe was divided in three different elements: water, air and land and surprisingly the system of property rights has the same attitude and refers to all above mentioned (Epstein 2012). This part of the literature review will focus on the property rights on the land, which itself is unique resource, as it is fixed and not producible (Jacobs 1999a). It is important to look at this issue, because system of trading with development rights has to deal with property law (Renard 2007).

In literature it is argued that property rights determine the ownership (Anderson, Zerbe 2012) as well as, they are settled up and certified by form of an authority or with the instruments like: constitution, regulation or statute (Blomquist 2012).

Different types of property rights are described in the theories by scholars. Such as: (1) State property, (2) Private Property, (3) Common Property and (4) Non-property (Bromley 1991) (Needham 2006). Private property is an individual's right in land and is the strongest tool for the distribution of the good (Davy 2009) as well, it has very long history and is social and legal institution (Schlatter 1951).

During the literature review we found out that property rights include different elements that are referred as “bundle of sticks” (Walters 2011) or “bundle of rights” (Renard 2007, Ostrom 1976). But what are the elements that are included in this bundle and determine the ownership? Some scholars refer to five different elements, as follows: (1) right to access, (2) withdrawal right, (3) right of management, (4) exclusion rights, and (5) right for alienation (Blomquist 2012) (Ostrom 2009). The definitions for above mentioned rights are provided below and refer to two authors, Ostrom (2009) and Blomquist (2012).

- Right to access – *right of entry in distinct physical property;*
- Withdrawal right – *right to harvest the products such as food for pastoral animals, harvest timber and water. Right of withdrawal can also be referred to storage rights;*
- Rights of management – *rights for taking part in decision making, right to regulate use patterns, right to improve/repair facilities;*
- Exclusion rights – *identify/determine who can and who cannot have an access to the property and if this right can be transferred;*
- Right for alienation – *right to lease or sell the any of above e mentioned rights. Also refer to right to transfer.*

It should be noted that scholars do not mention “right to develop”, but as we look at their definition of elements we can argue that development right falls in the category of withdrawal right - as it focuses on right to harvest the products and in right of management as it refers to improvements of facilities. Some scholars emphasize that an individual who holds all of the five above mentioned rights can be referred to be an owner (Ostrom 2009). Another interesting point is that, as Ostrom (2000) argues, if in the system of property rights the right of alienation is not considered, than this system is ill-defined (Ostrom 2000).

UN-Habitat’s publication “Secure land rights for all” (2008), also refers to land and property rights and clearly emphasizes several points which are generally agreed to be the combination of what is called rights (Walters 2011). It provides eight different elements. These elements are: (1) Occupy, enjoy and use, (2) cultivate and use productively, (3) exclude others or restrict, (4) purchase, sell, transfer, loan or grant, (5) bequeath or inherit, (6) improve or develop, (7) rent or sublet and (8) make an benefit from increased value or benefit from income from renting (Qyan, Payne 2008). Walters, (2011) adds three more elements to the list: right for civic participation, right to get the tenure security and finally, right to get access to bank credit and basic services. Last mentioned element led to big discussion among scholars. As De Soto (2000) argues property ownership is the main element that helped capitalism to rise and states that, if Third World will follow this path, people can produce capital² and invest in businesses (De Soto 2000).³

Walters 2011, also argues that entire elements in the bundle cannot be assigned to single individual or group of individuals and different parties can have different rights on the very same parcel of the land (Walters 2011).

Another controversial element in property rights we found out during the literature review is regarding tenure of security. As Walters (2011), in his article states bundle of elements also include the right for tenure security. But on the contrary Harvey Jacobs states that, private ownership may result in less security for the poor; as they can be forced to sell the properties as their ability to pay the land taxes is low (Jacobs 2011).

The rights in the bundle have significantly changed during the time as they are different now than they were in the past because of the big changes of the property (Jacobs 2009a).

If we will look in the past, Ancient Roman Law regarding the land and the rights said that: *“Whoever owns the soil, owns the way to heaven and all the way to the depths”* (Jacobs 1999a)pg.144

Jacobs (2009), argues that after technological improvements, after the invention of the airplane, land owners did no more own the rights “to heaven above”(Jacobs 2009a). Under classical definition of property, if the airplane flew over the privately owned property, it

² In De Soto’s words, this capital is dead and estimated to 9.3trillion USD) (De Soto 2000)

³ On the other hand, Payne (2008) argues that it is not always the case, because the proportion of property owners who took the loans to invest in business is tiny and none of them have used their property as collateral.(Payne 2008)

was blameworthy of trespass and if individuals could have demanded the compensation every time the aircraft was crossing their property, travelling by air would have been too expensive (Jacobs 1999a). Because of this Supreme Court of USA in 1940 decided to transfer the airspace right from individuals to public sphere (Jacobs 1999a). Changes in property are also seen in other aspects like - after movements of civil rights no owner can refuse to serve others because of race and ethnicity and finally after the rise of women's movement in late 19th century, no husband owns his wife and no parents their children (Jacobs 2009a).

Individual's right to make land use decisions without taking into consideration the interest of the whole society (resulting in farmland and wetland loss, suburban sprawls and downtown deterioration) was catalyst for private property right movement (Jacobs 1999b). This issue is well reflected in Garrett Hardin's article named "Tragedy of the commons", where the author argues that, it is a tragedy when individuals make decisions that are economically and socially beneficial for them and not sensible to public as a whole (Hardin 1968).

Jacobs (1999) emphasizes that one of the solution in the above mentioned conflict was to take out some of the elements out of the bundle of rights of private property owner and transfer it to the public sector's bundle ("public-ize") to achieve better land use decisions (Jacobs 1999b). Furthermore, scholars argue that if alienation is not considered in the system of the rights, it will lead to inefficiency as the holders of the rights will be unable to trade interests they have in improved resource system for another resources and at the same time individuals with efficient resource use system cannot purchase different ones "in a whole or in part"(Demsetz 1967).

Rights in the property differ in the world. United States' experience in rights started in its yearly years and was a place where every white migrant male was able to get the ownership on the land and make his future using the land as a capital (Jacobs 2009b). Private property was legally recognized in America in 1791, when in the Fifth Amendment of Constitution (which was referring to so called "takings"⁴) was noted that "... nor shall the private property be taken for public use, without just compensation" (Jacobs 1999a). In American law, ownership refers to "bundle of rights" and the components/elements within this bundle can be separated and treated individually, such as right for the development, mineral and air rights (Renard 2007). In Brazil separation of the rights to develop/build from the right to own, also became possible after articles 182 and 183 were applied in the Federal Constitution (Bretas-Barros, Carvalho & Montandon 2010).

On the other hand in France, Civil Code and Declaration of Rights of the country determines rights as unitary in the property on the land and includes the right of air and underground space (Renard 2007). Similar to France, In Netherlands property rights are not alienated in different rights and right for development does not exists (Janssen-Jansen 2008).

⁴ By introducing the phrase "takings", Constitution of United States recognised existence the private property, which can be taken only in case of public use by providing just compensation. But at the same time does not give a definition what the public use is, what is meant in just compensation and even what the private property is(Jacobs 1999a).

In many other European countries landowners can own the land and benefit from it, but their ability to make the decisions regarding how the land is used is very limited (McEvoy 2001). Different is Colombian case. In this country's Constitution (article 58) property is not considered as a right and is stated that property implies obligations, as it is a social function (Azuela 2009).

Whatever the property rights are now, Jacobs (2009) argues that property will change because it has to and gives some ideas about how it might evolve. He argues that in the future house that individual will own, will remain his castle and he will be still able to keep others out despite who the comer is but this approach will change regarding the public spaces like private clubs or colleges (Jacobs 2009a).

Jacobs (2009) continues to argue and emphasizes that in the bundle of rights where some elements refer to be "mine" (like right to harvest minerals, cut trees or use chemicals for land development) will no longer be so, wildlife will gain strong and independent rights and finally, government's ability to manage the land that is privately owned will grow, returning to legal situation that was in early 20th century (Jacobs 2009a).

2.1.1 Zoning

We cannot avoid looking at the zoning regulation which is defined as collective property right (Nelson 1977) (Fischel 1985) (Fischel 2012), or as municipal property right because it is one of the most important regulation in land use which is undertaken by local governments (Fischel 1998).

Fischel (1998), argues that zoning regulation puts different constraints on land development as most of the classifications in land use can be changed without asset of land owners who are affected with changes (Fischel 1998). Zoning regulations can include use of the plot (for example, residential, commercial, agricultural or industrial), can define maximum building height, as well as number of units on the parcel, boundaries for the building towards its neighbours and street, requirements for parking and finally demands paid by developers for related infrastructure such as sewer and roads (Fischel 1998).

Sandroni (2011), in his article states that land scarcity is the result of the zoning restrictions together with bad accessibility and because of owners ability to keep the serviced land vacant (Fischel 1985)(Sandroni 2011a). He argues that owners of the property were benefiting from increased value created by public investment and changes in the zone. In Brazil, because of the approach that incremented value had to be shared between property owners and public sector, Urban development act was introduced in 2011 (Sandroni 2011a) which will be more closely discussed in the last part of this chapter.

Fichel (1999), in his article looks at the trades in zoning which were allowed by early zoning laws. By this laws private owners were allowed to change the zoning in case if he or she got the consent from neighbours to the property (Fischel 1998). Another approach to

zoning is called exactions where, developers whose projects need more than few unites, are required to pay for the infrastructure or provide them directly (Fischel 1998).

And finally, zoning regulations also define, as mentioned, maximum FARs in different part of the city but as Brueckner (2009) argues these limits are not big constraints on development as FARs often tend to follow the market (Brueckner 2009).

2.1.2 Legal perspective – conclusions

As we have seen from this part of the research, property rights can be defined or seen as a bundle with the different elements. Some scholars directly include right to develop in this bundle whereas others indirectly and combine it within the right of management and withdrawal right. For us it was more important to know that the elements can be separated and as scholars argue can be treated individually. As in case of development rights, they can be traded and if they can be traded this means that they are marketable. Because of it next we will look at market perspective and see whether trading with development rights is possible.

2.2 Market perspective

Marketing with the development rights refer to a system where extra floor area ratio (FAR)⁵ is traded and as a result of this kind of trade, city gets dense areas (Philips 2012). But does extra density have a value or is it enough to finance the infrastructure? And if we argue that it is density that is created, is it desirable for the city? In this part we will consider all this issues and will try to analyze them.

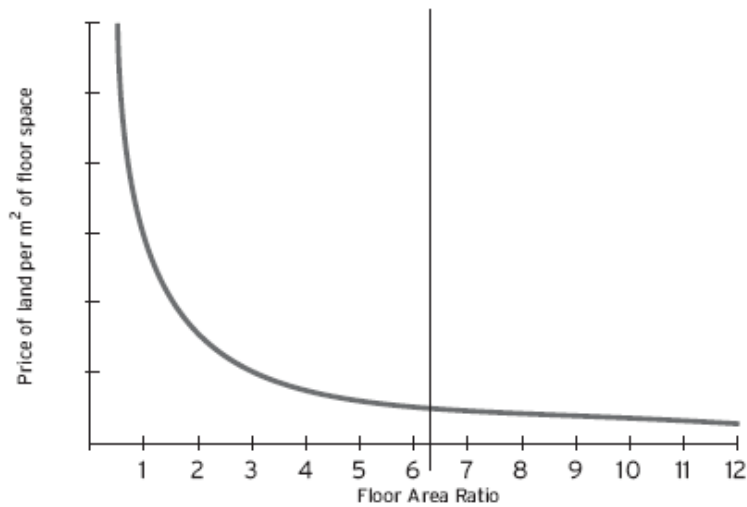
Bertaud (2010), while discussing the markets in urban land, states that urban land value is created by concentration of economic activities and this concentration of floor space results in accelerative returns for city's economies. In his paper, he also states that the places where land prices are high, people/developers will either consume less floor area or will change capital in land by constructing multi-storey buildings which will lead to an increase in density (both population and jobs) without increasing demand for the land (Bertaud 2010).

Above mentioned author in his article gives an example of how land prices per square meter of floor space react when floor area ratio increases⁶. (Figure 2)

⁵ FAR – Land use intervention that is used to regulate the density of development, which defines minimum lot size as well as height restriction and is calculated by dividing total floor area by the size of the parcel (Brueckner 2009).

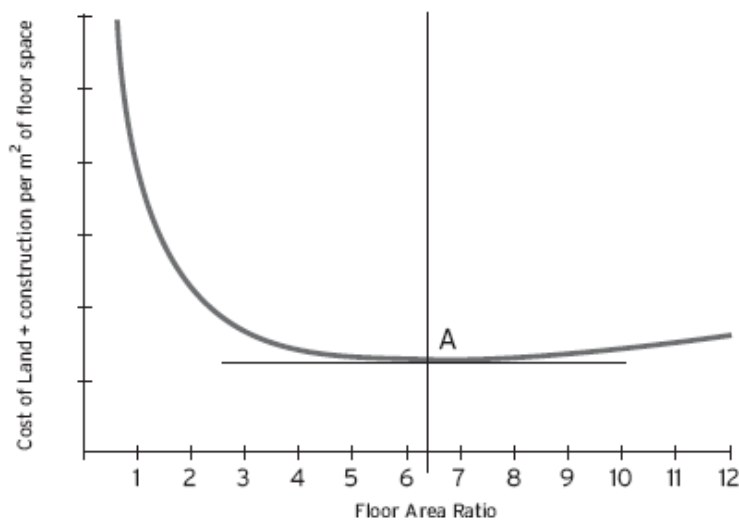
⁶ Description is based on market conditions where it is assumed that land price is determined by consumers demand (Bertaud 2010).

Figure 2.1: Effect of land price per square meter of floor space when FAR increases
Source: Bertaud 2010.



Bertaud, (2010) argues that when floor area ratio is equal to one then the cost of land per square meter of floor space is the same as the price of the land and as FAR increases, it tends to go down. Another graph provided by author shows reaction of construction costs plus land price per square meter when floor area ratio is increasing (Figure 3).

Figure 3.2: Effect of Construction cost per square meters of floor space plus cost of the land when Far changes. **Source: Bertaud 2010.**



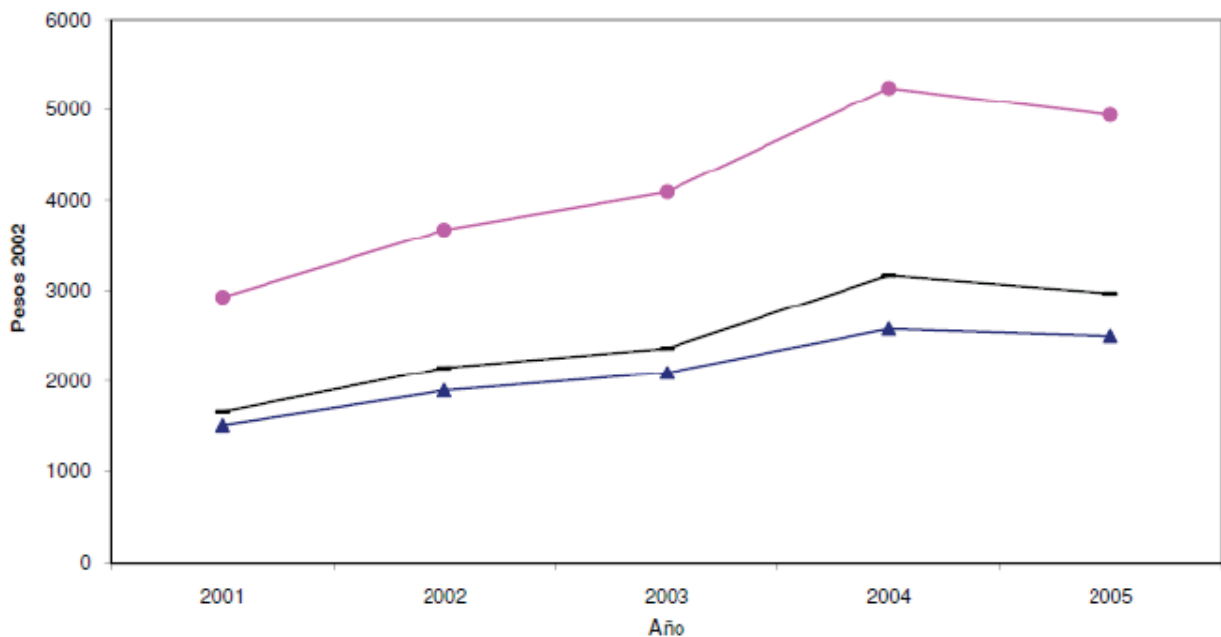
As figure 3 shows, maximum price for given land and given construction cost reaches its minimum when floor area ratio reaches 6.4 and with a different land cost – when land prices decrease – the value of the FAR would be lower than one shown in the Figure 3 and is market with “A” (Bertaud 2010).

The values are different in different locations as, for example, higher floors can have bigger sale value than lower ones or it can be that consumers may be willing to pay more in apartments which have no more than four floors and depending on market conditions, the

highest and best use of the land will be dependent on used FARs (Bertaud 2010). Bertaud (2010) also states that developers will tend to maximise the difference between total costs of the land + construction and sale price of the floor space per square meter.

Paper published by Lincoln Institute of Land Policy in 2011 gives an example of land price change in Mexico Federal District. Regulation called Bando2⁷ made a division of urban area in three different zones: (1) high density zone, (2) restricted development zone and (3) zones where no changes were made (Naranjo, Quintero 2011). The effects of these regulations on land prices are shown in Figure 4.

Figure 4.3: Effects of Bando2 regulations on land prices. Values of the land were provided by Federal District Finance Department. Red line represents high density zone, black line represents areas where development was restricted and blue line – areas where no changes were made. Source: Naranjo,Durfari.; Quintero,Oscar. 2011



As authors in this paper conclude, positive effects in land prices were seen in the zones where density was increased and equalled from 21 to 35 percent in years 2001-2005, while no significant effect was observed in the areas where development was restricted (Naranjo, Quintero 2011).

Other scholars regarding the land economics argue the big role of the density in relationship with the land value increase. One of the arguments provided by Ottensmann (1977) is that higher demand for the space has high connection with population growth which is reflected in more intense land use as well as rise in the values of the land (Ottensmann 1977). Above mentioned author, backs up his arguments by providing the example of the United States where the value of the land doubled due to one percent growth in the population. Tse, (2001) in his article argues the same, by giving the evidence from city

⁷ Objective of this decree was to change growth of the city which was considered to be chaotic.(Naranjo, Quintero 2011)

of Hong Kong and stating that because of high competition in scarce resources, density was one of the main reasons of land value increase (Tse 2001).

In the literature, it is also argued that competition for higher density will attract developers as they will compete with each other in order to benefit not only from high density zoning but also for fiscal and administrative incentives and this competition will effect land values (Naranjo, Quintero 2011).

Above mentioned arguments are in favour of the density and argue that it increases the value of the land, but during the literature review we found out that some scholars have the opposite opinion. As for example Gills and Hagan (1979) looked at the city of Toronto and stated that high concentration of the population led to bad and same time unpleasant environment for the citizens (Gillis, Hagan 1979). They argue that one of the reasons why some of the Toronto's areas were experiencing poor conditions of living together with claustrophobic spaces and increased crime was because apartments in the areas were in close proximity to each other, resulting in value decrease for the whole neighbourhood and, as authors argue, this kind of situation/conditions can be described as formula for ghetto (Gillis, Hagan 1979).

Haughey Richard (2005) in his article emphasizes the opposite and challenges the ideas proposed by Gills, Hagan (1979). The author says that low density development is financially unsustainable leading to urban sprawl and, providing the basic infrastructure like roads, police, fire stations schools and libraries or even the sewer system for the zones that are spread over the large areas, are expensive and inefficient for the local government and, on the contrary, well designed - as well as well integrated development which reflects the higher density is success factor for the planning (Haughey 2005).

He also challenges the ideas which are related to density and which by scholars Gills and Hagan (1979) are mentioned as undesirable factors of the high compact settlement. Haughey, (2005) states that high density development can be safe as well as practical and desirable for the citizens and to back up his arguments, provides an example of New York and Chicago which, in his words, are one of the most expensive areas in the United states and also are one of the safest and concludes that, it is not the density which creates unsafe environment for the city (Haughey 2005).

Article "Higher Density: Myth and fact" emphasizes several factors that Haughey,(2005) calls "Myths" and provides facts to challenge these ideas, like:

- Argument that the higher density will require more infrastructure as development will require more public services, is not always the case. Author argues that compact nature of development does not need provision of extensive infrastructure because in this areas less families live with children and they have less demand for schools or other public services;
- High concentration, as already mentioned many times, will not decrease the value of the property in the surrounding, because there is no difference between the value of the property which are located near the high density and those which are not

- Next issue is traffic. It is argued that high density will result in traffic congestions and problems with the parking, but as scholar argues opposite. He emphasizes that less traffic per unit will be generated in compact way of development than in lower densities as well as it will make public transit more feasible and opportunities for parking which can be shared will be created
- We already addressed issue of crime and concluded that there is no significant difference between the areas with low and high densities.
- Effects on environment are discussed next. Is high concentration more destructive to environment or not? As author argues possibility of pollution of water or air in low densities are higher and one of the reasons for this is that bigger areas of the land need paving.
- Higher densities are not only good for the developers but also for the citizens, because well designed areas can be attractive for citizens.
- If the focus will be on suburban areas where “myths” say that, no person will like compact development, author challenges this argument by the diversity of the population in the world and states that more and more households now prefer to live in higher densities even if these areas are suburban.
- And finally, evidences provided by Haughey, (2005) show that not only high income people decide to live in high concentrated areas but also other income groups choose to live there.

We mentioned these factors to show that density is better solution for the cities and if densities are considered to be one of the reasons why the right for development is traded, we can argue that these rights have the value and value can be big. But is the value captured from marketing the rights enough for financing the infrastructure or not? Below we will address this issue.

2.2.1 Examples of financing urban infrastructure with land value capture instruments.

As Peterson (2009), in his article “Unlocking land value to finance infrastructure” argues, population growth in the world will put a huge demand for infrastructure, and investments in this sector will be important for efficiency of the cities as well as, for economic production, for providing the basic services for increased population and for upgrading the public services and in the same time, economic and population growth will increase the prices of the urban land and property and city’s ability to capture the part of the increased value will give the municipalities chance to invest it in providing the services (Peterson 2009).

Peterson (2009) explains different instruments which capture the increased value such as: public private partnerships (PPP), betterment levies, developer land sales, value capture via project related land sale, impact fees and developer exaction. We will not discuss all above mentioned instruments but will look at the results to see their ability in financing the infrastructure which are provided by the author. He gives the evidences from around the world and shows the outcomes that were achieved by different LVC instruments.

For example, in Cairo, Egypt by auctioning desert land, government gained 3.12 billion dollars (which in total was 117 times more than property tax collection and accounted for 10 % of the revenue for the national government) that gave them possibility to finance the internal infrastructure for the area and also the connection highway. Another auction of land in Mumbai, India in the centre of the city generated the revenue equal to 1.2 billion USD and was used to finance the transportation plan. Property sale of Victoria and Albert Waterfront in Cape Town, South Africa captured 1.0 billion US dollars and made it possible to invest in transportation infrastructure (Peterson 2009).

Another example is Brazil where Public authorities, in order to generate income for the urban infrastructure can sell the development rights. Under these regulations developers do not pay fees for building densities which are in the scope of normal floor area ratio determined by Sao Paulo regulations, but the municipality has the ability to charge them for extra space/density and money collected (which goes to special fund) can only be spent inside the Urban Operation and for specific infrastructural projects (Peterson 2009). This method will be more closely discussed later in next paragraph but here we provide example from one of the UO.

Urban Operation Faria Lima and Agua Esperaiada were first two examples where instrument of selling development rights were used to capture the value, or to say it differently, to receive compensation from projects which were presented by the developers (Sandroni 2009). In Faria Lima, which included 410 hectares of development area, municipality made an offer to sell over 2 million square meters of additional floor space (Peterson 2009). Until 2009 revenue generated from this Urban Operation was corresponding to total amount of 365 million USD and as Sandroni (2009) argues, in the future the income can be much more than it is necessary for the investment in UO (Sandroni 2009).

And finally, we focus on example of Bogota, Colombia where “betterment fees” have been used. After implementing this instrument, within ten years (1997-2007), government managed to collect one billion US dollars and this money was used for improvements in infrastructure such as city streets and the bridge. But it is also important to mention that, money collected from ten years were only accounting for 50% of the investment and rest of the money were generated from the loan (50 million USD) from International Finance Corporation and international peso-linked bond issue (300 million USD)(Peterson 2009).

2.2.2 Market perspective – conclusions

From this part of analyze we have seen controversial arguments regarding the density impacts on land values. Some examples show that high concentration increases values in the land and is more desirable for city's development, while some scholars argue that high density creates claustrophobic spaces and results in value decrease.

The instruments which are related to capture the values from densities in order to finance the infrastructure were also addressed. Examples around the world showed that in some cases instruments were able to cover all the costs for infrastructure while in other cases they managed to do it only partly.

2.3 Different systems and their implementation

As we have already mentioned, different systems of marketing with the development rights exist. Trading with the rights started after Kyoto protocol was adopted in 1997 and gave the countries opportunities to trade with rights to pollute. (Renard 2007). Systems we will discuss deal with the land and property law and are used to capture the increased value of the land. By saying this, we once more want to emphasize that rights in property are referred to bundle, and the elements within the bundle can be separated and treated individually (Renard 2007). Most common systems which we found during the literature review are: Transfer of Development Rights (TDR), Purchasing Development Rights (PDR), and Selling the Development Rights (SDR). During the literature review we found out other ways which is considered to deal with the trade. System called Donation of the Development Rights (DDR) and Exchanging the Development Rights for Other Property. And finally, we also consider land leasing to be similar way of marketing the rights. In this part of the thesis we will briefly discuss all above mentioned systems to see how do they work and later, focus will be drawn towards example of Sao Paulo where additional construction rights are sold by municipalities (i.e. SDR). We will analyze last mentioned system closely as it is more related to the study we are undertaking.

2.3.1 Plafond Legal de Densite

French system of urban planning was always an interest for other countries as French urban planners were creating different land management tools and one of these tools, interesting for us, is called Plafond Legal de Densite (Aveline 1997).

Urban land was not considered as an issue in France until 1950, but after the World War country faced necessity to take quick and important measures such as Priority

Development Zones⁸ (“ZUP”s) which were introduced in 1958 (Aveline 1997). But our attention is drawn to system of PLD. 1975 Galley Act was introduced as the government was trying to benefit from higher building densities and by this Act “Plafond Legal de Densite” (French translation of Legal Density Ceiling) was established (Aveline 1997).

Aveline (1997) in her article analyses the system and states that PLD is a tool which limits the right of the land owner to build to certain density and is set to one sq.m. of the floor area per square meter of area of the land⁹ (i.e. FAR = 1.0) and if the land owner wants to build extra density, in the places where it is allowed by town planning rules, he or she has to pay a fee which is equivalent to needed area of extra land value in order not to exceed the PLD.

In the same article the goals of the system is explained. Legal Density Ceiling system had 3 goals which are: (1) to decrease land values, (2) to limit building density and (3) to increase revenue source for local authorities and finally, as PLD system became ordinary tax levied in rich municipalities of Paris where land values are high and where most of the office space was created in 1980s, system managed to achieve only third goal (Aveline 1997).

2.3.2 Transfer of Development Rights

Transfer of Development rights were introduced in the United States of America with the main objective to decrease development potential in the areas which are intended for preservation and transfer these rights to the areas where the growth is needed by creating two areas - (1) sending sites (referring to preservation areas) and (2) receiving areas (places of the growth) (Pruetz, Standridge 2008). Scholars Pruetz and Standridge (2008) in their article look at this system and analyze it. They come up with several points which are important for TDR system to work efficiently. They considered 20 most successful implemented programs and identified ten most essential factors which were present in all of the projects and made it possible to preserve total amount of 350,000 acres of land (Pruetz, Standridge 2008). Some of these factors, which are relevant to our discussion, will be addressed below.

1. Demand factor – Developers will be interested to buy extra rights for the development in order to increase their revenue by building extra floor area. This means that, Demand for the density has to be present in receiving areas to make TDR programs successful. Authors argue that, inadequate demand will lead to failure;

⁸ In “ZUPs” (Zoning a Urbaniser en Priorite) government could,. By compulsory purchase or by negotiation, acquire the land, develop it, add public facilities and sell it to private developers. This zones where mainly created in the areas where land price was relatively loa and are known today as “Grands Ensembles”.But the system was not effective as it resulted in land speculations leading to land price rise.(Aveline 1997)

⁹ Rate was same to all territories of France except from Paris where rate was equal to 1,5(Aveline 1997).

2. Adapted Receiving Areas – Pruetz and Standridge 2008, name seven attributes that have to be in receiving areas. Such as: (1) Sufficient infrastructure to house extra development; (2) Political will; (3) Compliance with the present development; (4) Clear designation; (5) Compatibility with the plan; (6) attractive location for developers and (7) if sending areas cannot allow more growth, receiving areas have to be located in other jurisdiction. Authors argue that communities have to make combination of above stated factors depending which fits best for the situation.
3. No alternatives to TDR - TDR programs can fail if community gives developers alternative opportunities (they can group lots and create one single parcel) for additional development. By giving such opportunity, developers will try to achieve density without purchasing TDRs resulting in non effective TDR system.
4. Certainty for developers - Communities have to provide high certainty to developers as they may be concerned about delays in approval process and ensure them that, they will be able to built at maximum density as soon as they will comply with all TDR requirements.
5. TDR promotion - All interested stakeholders have to be informed about the availability of transferring development rights, what are the advantages of the program and how they can benefit from it.
6. Simplicity - System has to be simple as it will help to get support among landowners, developers, officials and preservationists, general public and homeowner organizations.¹⁰

In the conclusion of the article the authors emphasize that when designing TDR programs community has to bear in mind that demand factor is crucial for effective work of the system (Pruetz, Standridge 2008).

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1. ¹⁰ *We addressed 6 important factors which make TDR programmes successful, but there are extra factors which are stated by scholar. Regulations in Sending-Areas - Strict regulations, like sending-area zoning, will have negative result in development of TDRs. Authors emphasize that, this kind of regulations can affect price rise for TDRs and resulting in program failure, because developers will find it too costly. Communities have to encourage low price by giving away more TDRs per acre of preserved land. But it needs to be carefully designed not to generate too many transfers and relatively small number of conserved land; Market incentives - TDR programs can be based on on-to-one transfer quota, meaning that one unit sent from the sending site will be resulting in one additional unit in receiving area. Authors emphasize the importance of market incentive and state that in some successful TDR systems developers are available to develop more than one dwelling per transfer. They give an example of transfer ratio equal to five-to-one. Public Support for preservation - Without these support components of TDRs can become issue of political compromise that can lead to irregular decisions regarding the limitations on sending areas and receiving area locations. This factor can damage the effectiveness of program; Authors suggest to have well functioned webpage with regular updates about TDRs; A TDR Bank – A TDR bank is defined as officially authorised entity which can buy, hold and resell the Development Rights. In case landowners in sending areas cannot find the private developer, TDR bank buys development rights from them effectively helping the preservation to be ongoing process (Pruetz, Standridge 2008).*

Renard (2007), focusing on TDR systems in United States of America and France, emphasizes several factors which need to be taken into consideration. He argues that, Transfer of Development Rights (which is planning policy) is a system which redirects the development potential from one zone to another and at the same time is more like a payment of a compensation to the landowners for the restrictions they get property in sending areas, rather than creating the market in rights (Renard 2007). Another issue is how money is paid. This approach considers cooperation between two private entities and the price for development rights is negotiated between the owners of the property in sending areas and developers who have the incentive to build extra floor area in receiving zones (Kaplowitz, Machemer & Pruetz 2008). Renard 2007, also underlines the problems that can appear in TDRs and states that, system is very tempting for authorities to make the change in actual density by down zoning it and can lead to litigation because, as author argues, it is very difficult to handle with the incentive zoning (Renard 2007).

2.3.3 Purchase of Development Rights

Second system we focus on is the Purchase of Development Rights (PDR). It considers purchasing the rights by the public sector from the privately owned land with the main objective to protect agricultural land, which is suffering from a pressure to be converted in urban land and, as scholars argue, system is also used to protect open spaces. PDR system was also introduced in USA (similar to TDR, it is also considered to be a system where compensation is paid for the restrictions on development) as a solution to a problem that stakeholders like farmers, planners and elected officials had (Daniels 1991).

As Daniels, (1991) in his article argues United States was losing 3 million acres of agricultural land and the officials were in need for effective tool to deal with this process. At the same time zoning system was opposed by the farmers as no compensation for the restrictions were paid and as well property tax break was neglected, because the amount of the money proposed by developers was way higher than inducements (Daniels 1991). Author argues that similarly to TDR system, PDR also considers treating the right for the development separately while farmer retains the right to sell or pass the land as well as the title. Money captured from this kind of transaction can be reinvested in farm land, but it is also necessary to state that no restrictions exist. Landowners can also decide to spend the money for other purposes. What is also interesting is that, development rights can be bought back after certain time by paying the original price plus the value that has been appreciated during the period (Daniels 1991).

Same time Daniels (1991) focuses on the strength and the difficulties that occur in PDR system. He emphasizes that one of the good aspects about the system is that it is fair towards the landowner and also useful for young farmers as they are in a search for capital. Problems are related to speculations, price increase and time procedures which are relatively long as all applications need to be carefully revised, marked and approved by different levels of the government and only after this, offers have to be done and accepted. Increase in procedural time led to not successful results as development was happening at much higher speed than preservation system. Another constraint is the ability of the

landowners to sell development rights voluntarily, meaning that farmers may refuse to participate or price can be increased as poor property owners will be demanding for higher returns and as they can use bargaining ability, determination of the price has to be carefully done so that not discourage landowners from selling the development rights and at the same time administration needs to have an opportunity to achieve the best price (Daniels 1991).

Daniels (1991) also provides the steps that can make PDR system more efficient such as: creation of efficient agency for administration purposes (autonomous, state or country agency) which has to determine amount of the money that will be spend during the certain period of the time and also determine target area by using ranking criteria (by looking at (1) degree of pressure and (2) by looking at quality of land) and to draw the priorities towards the areas that rank highest.

Finally, we focus on how the price is calculated. As we have seen in TDR system, price is negotiated between two private stakeholders (Kaplowitz, Machemer & Pruetz 2008). But in PDR approach value is calculated by looking at the difference between the market value and agricultural value (Daniels 1991). For example - if the market value is 200.000 USD and the agricultural value is 50.000 USD then:

Formula 2.1: calculating the value of development rights in the system of PDR

$$\text{Development rights} = 200.000\text{USD} - 50.000\text{USD} = 150.000 \text{ USD}$$

Development rights are worth 150.000 USD

2.3.4 Donation of Development Rights, Exchanging Development Rights and Leasing

Not much is written about other systems which we discovered during the literature review. First one is called Donation of Development Rights (DDR). DDR is voluntary and charitable contribution from the side of the property owner, who in return gets deduction of federal income tax or other tax benefits such as property and estate tax and, contrary to PDR or TDR systems donation of development rights does not involve money changing between interested parties (Legacy Land Conservancy 2012). The name of this system is quite interesting and we can argue that it is not exactly the donation as the owner is paid with tax rebates. Another system we think is interesting is called Exchanging Development Rights for Other Property. This system in some aspects is similar to TDR but on the contrary to it, owners do not gain from the compensation but in exchange get the property which is worth to their owned development rights (Harris 2012).

Before analyzing the system of selling the Development Rights, we would like to draw attention to the land leasing, because it is also one of the ways to trade the rights. Our statement is backed by scholars who give the description of public lease hold and state that system allows the governments to stay the owner of the public land as well as retain the title and at the same time lease to private entities the right to develop or use, transfer or inherit and right to benefit from the land for specified time (Hong, Bourassa 2003). At the same time it is important to note that, as scholars argue, leasing helps the governments to capture the

money from the increment value of the land by collecting land rents which can be annual or by any other payment system (Bourassa, Neutze & Stron 1996).

Our argument becomes stronger when we look at the objectives for the land leasing. As Hong and Bourassa (2003) in their article state, case studies showed that governments by introducing leasing policy wanted to achieve common goals which are: (1) capturing the land value increment in order to finance the infrastructure, (2) assisting urban development/redevelopment, (3) protecting the green spaces and keeping the areas for public purposes and (4) stabilizing prices for the housing and the land (Hong, Bourassa 2003). Some of these objectives are similar to those we have already discussed and below, in the next part of the research we will see that one of the main objectives to sell the development rights were to finance the urban infrastructure.

2.3.5 Selling Development Rights

Finally, we look at the system of selling the development rights and focus on the case study of Brazil because in this country, revenue generated from SDR system is used for infrastructure as well as for other things.

In 1970's two largest cities of Brazil, Sao Paulo and Rio de Janeiro were facing non sustainable urban development and urban specialists together with the architects, jurists, sociologists and public servants started to discuss possibilities of implementing new interventions instruments to overcome the problems country was facing (Sandroni 2009). Sandroni (2009) in his article states that solution to the mentioned problem was seen in document named "Embu Letter" that was introduced during the meeting in 1976. This document was catalyst to adopt articles 182¹¹ and 183¹² in the Federal Constitution of 1988, known as "The City Statute" (Sandroni 2011b).

Scholars Bretas-Barros, Carvalho and Montandon (2010) look at the City Statute and analyze it. Chapter II (article 4) of the law states that, municipality has to award or transfer the right to build or right to change of use. As authors state, right to build instrument was designed with the objective to promote urban development, to densify the certain areas of the city so that it became possible to use existing infrastructure at maximum level and also to give local governments opportunity to increase the revenue source (Bretas-Barros, Carvalho & Montandon 2010).

One of the main concepts of "Embu Letter" was "Solo Criado", which is defined as all additional area, including occupation of underground space as well as air, which is above single coefficient (Silva 2006) or as "Created Land" (Sandroni 2011b). To say it easier, it is a

¹¹ This article states that it is the responsibility of the municipality to deal with the urban policy as well as guarantee development of city's citizen and the social function of it and also, municipal Mater Plan is defined as basic instrument for the urban land organization which has to define for each zone of the territory the use and the type of occupation (Bretas-Barros, Carvalho & Montandon 2010).

¹² Article 183 guarantees the ownership right of the individual who uses the property in accordance to its legal purpose (Bretas-Barros, Carvalho & Montandon 2010).

possibility to build extra Floor Area Ratio which is the consequence of property right separation (Sandroni 2009). Sandroni (2009) emphasizes that one of the most important aspect in the “Embu Letter” was that, if there was an increase in FAR or in the land use (resulting in value increment), benefit that private sector was getting had to be shared with public sector. But the system’s problem was the determination of the share of increment values between two interested stakeholders.

The System that was introduced in 1987, after approving the interlinked operations (Operacoes Interligadas) Sao Paulo became first example where incremented value was captured by public authorities through onerous grant (“Outorga Onerosa”) with the main objective to solve the problem of slums which were occupying privately owned land with good location (Sandroni 2009).

In this system, as Sandroni (2009) states, deals were done between private and public sector and the co-operation included that private property owners - whose land, by the time of deal was occupied by slums - could ask for additional floor area ratio or even the change of land use and 50 percent of incremented value had to be shared with the public sector. Income was earmarked for social houses which authorities had to build for families who would have been removed out from the plots they were occupying.

One of the changes that system had¹³ was that, bigger amount of Interlinked Operations where done with the land that was not invaded by slums, but value captured were still used for houses for relocating the people from slums which were in risky areas. (Sandroni 2009)

Sandroni (2009) emphasizes the positive sides of Interlinked Operations and argues that system created the principle of capturing the land value increment for the public sector, as they were benefiting with generated extra income and could partly solve the problems of the slums. Also it was good for property owners and the developers who did not have to wait for zoning law changes which was considered to be to complex.

Before the municipality in Brazil started to issue certificates for additional construction potential, in UOs (tool was created in 1995 and is seen as transformation tool based on the public private partnership with the incentives to modify plot’s FAR, footprint and land use and used in the areas of the city which needs urban or infrastructure updates, such as: drainage, avenues, public spaces, houses for the people who live in the slums or other services and the funds needed for investment has to be captured due to changes in zoning) economic compensation was calculated through formula (Sandroni 2010). The formula is provided below:

¹³ System was working for over 12 years, from 1987 to 1998, until it was seen not Constitutional to change the zoning in plots and was considered to be interfering within the master plan as well as it was distorting zoning law and was creating privileges for land owners and also developers(Sandroni 2009)

Formula 2.2: Formula for calculating economic compensation in Urban Operations

$$EC = k1 * (Vt2 - Vt1) * TA$$

Where:

- EC:** Economic compensation;
- K1:** Coefficient of minimum percentage of value increment captured by administration;
- Vt2:** Market Value of the plot in square meters after the benefits;
- Vt1:** Market value before benefits;
- TA:** Total area of the plot;

Sandroni (2010) also focuses on instruments created in Faria Lima in 1995 and which started to operate in 2004. "Cepacs" are certificates that are issued by city hall and sold through electronic or private. Before auctions, "Cepacs" need to be authorized by CVM (Comissao de Valores Mobiliarios – United States Securities Exchange Commission) and these certificates give opportunity to developers to build at higher floor area ratios as well as to change the use of the plot. (Sandroni 2010)

Sandroni (2010) emphasizes that values captured from SDR can only be used for: (1) social houses, (2) creation and implementation of public infrastructure, (3) directing urban development, (4) Creating public and green spaces, (5) land regularisation and reserves, (6) creating environmental areas and (7) protecting cultural, historical and landscape areas.

These certificates are used in special Joint Urban Operation (UO) areas which require urban improvements and are captured by SDR from City Hall through EMURB (Empresa Municipal de Urbanizacao) to private developers and can be used only in perimeter of UO for which they were issued. The amount of bonds depend on the extra area that can be supported by UOs with present and future infrastructure and is achieved by analyzes done by economists, architects, engineers and technical servants. Each UO determines the maximum amount of square meters for residential and non residential use. The important issue is that certificate holders have to link acquired certificates to the lots before stock of square meters reaches the maximum in a sector. If it is not achieved, developer loses the right to use them and he/she is only allowed for using it another sector, within the UO (Sandroni 2010).

Sandroni (2010) emphasizes that value of the certificates are determined in relationship with the prices of the plots and location of the parcel within the Urban Operation area. The advantage of selling certificates is that municipality captures the money before development of the certain area starts. This helps public administration to avoid using its budget for investing in improvements. On the other hand private sector benefits from larger floor area ration and can use them whenever he/she decides that it is best moment for launching the project.

Certificate of additional construction potential was introduced as an alternative to previous system which had the problems of calculating the benefits received by developer and the percentage that hi/she had to pay to administration. Problems existed also in payment system. Developers had to invest calculated value (determined by Urban Operation norms) in the in the works that were listed in each Urban Operation area. At the same time, opposite to SDR, these investments were done parallel to construction that developer was undertaking. In case of project construction delay, the infrastructure improvements were facing the same problem (Sandroni 2010).

The first auction revenue managed to capture of 15 million USD and were used to finance the infrastructure. By comparing new system to older one, author states that if selected 12 projects were approved with this system and not by old one, revenue could be 350 percent more (Sandroni 2010).

Sandroni (2010) also looks at the auction where relatively low bonds were sold (Faria Lima UO) and emphasizes the causes of failure:

- Minimum price for buying bonds were higher than during the previous system;
- Some developers already had licenses as they were aware of Cepac law approval;
- There could have been a shift from one Urban Operation to another, where certificates were relatively cheaper;
- There was uncertainty which was related to SDR system due to winning the elections by opposition criticizing the it;

While issuing bonds, certain issues have to be identified. Such as: (1) The UO areas where certificates will be used, (2) the interventions which will be financed with money captured, (3) the full value of the bonds, (4) The cost for each certificate, (5) total amount to be issues and (6) in case Cepacs are intended to be used for changes in land use, the coefficient of the conversion (Sandroni 2010).

Sandroni (2010) also focuses on risks that are related to issuing these bonds. He emphasizes that potential buyers have to be aware that prices of the bond can go up or down and is dependent on real estate market. They cannot claim money back if they do not use it and they, as mentioned above, have to immediately link obtained extra floor area to the land. Payment for these bonds can be done in quotas so there is the risk of default. If it happens administration has to make the decision either to continue and finish works with the money from the budget or to wait for another auction. Administration also has to update with the information about amount of bonds which will be sold in private and public auctions (Sandroni 2010).

Apart from certificate system, other ways do exist in Sao Paolo, Brazil what Sandroni (2011) calls "Buildable Land and Development concession". Author, while analyzing the system, says that instrument gives municipality possibility to grant additional building right to the parties in exchange that they will build social houses or improve infrastructure (roads, sewage or other services) in the areas where concession is made, putting them as well as the municipality in win-win position (Sandroni 2011b).

After introducing development concession tool in strategic Master Plan of Sao Paulo, minimum and maximum FARs were set which are different regarding the location as well as

plan made limitations in the supply of non-residential and residential building potential individually in every district of the city (Sandroni 2011b).

The calculation of financial compensation is done through formula established by law, which includes planning and as well social interest factors.(Sandroni 2011b) Formula for compensation of development concession is provided below.

Formula 2.3: Formula for calculating financial compensation in the system of “Buildable Land and Development concession”

$$Cf = Fp * Fs * B \text{ or } Cf = Fp * Fs * vt / Cab$$

Where:

- Cf:** Financial compensation for every additional square meter of the building area;
- Fp:** Planning factor which is ranging from 0.25 and 1.4;
- Fs:** Social interest factors, which is between 0 and 1.0;
- B:** Benefit allocated to the property which is calculated by using equation vt/Cab ;
- Vt:** Value of the land per square meter determined by Property Value Map
- Cab:** Basic floor area ratio.

Sandroni (2011) also gives detailed definition/explanation of Fp and Fs factors in the formula that we have just mentioned.

- (Fp) Planning factor- this factor either encourages or discourages the densities in the specific areas and takes into the consideration the infrastructure (as well as transit and transportation) which is presented. It can also focus on bigger compensation from selling the rights to build to business in the areas which are improved and is different according the land use. For Residential purposes, Fp is from 0.6 up to maximum 1.2 and for non-residential uses from 0.3 and 1.4 (0.7 is considered to be predominant).
- (Fs) Social Interest Factor – factor enables to make reductions/exemptions depending on which type of social activity (social housing, health, cultural institutions, educational and sport and leisure activities) will be developed. Coefficient varies from 0 to 1. If the developer will create social housing as well as schools, hospitals, infant care and health clinics, sport and leisure institutions, houses of worship or public culture, than the coefficient is equal to zero. Meaning that developers are exempted from paying compensation for concession. For the housing, which is popular in market and ranges from 50m² to 70m², coefficient is between 0.5 and 0.9 and those which are over 70 m², coefficient equals to 1.0. If hospitals and clinics as well as schools, universities or cultural facilities or day-care centres are sponsored with non-

profit organizations, than $F_s=0.3$ and if it is done by other sponsors, above mentioned activities have to be provided with coefficient 0.7

To summarise economic compensation in the development concession, as smaller F_p and F_s are smaller is the amount of the compensation that the developer has to pay but at the same time, incentives for him/her to develop a project is bigger.(Sandroni 2011b)

2.3.6 Different systems and their implementation - conclusions

We considered different approaches which deal with trading of development rights. Before starting literature review, we only knew three systems which are TDR, PDR and SDR. But through the process of analysis we found out more. DDR is one of them and EEDROP is another. While analyzing leasing system we realised that it is also one of the ways to trade with DRs because leasing is described as approach where government, for specified time, trades with trades with right to develop or use, transfer or inherit and right to benefit from land (Hong, Bourassa 2003). And finally it is important to notice that SDR system capture value increment with the objective to finance the infrastructure and as well, compared to all analyzed systems, is market oriented (in Sao Paulo SDRs are sold via public and private auctions).

2.4 Conceptual Framework

Figure 5.4 Concept of trading with Development Rights



Chapter 3: Research Methodology

3.1 Introduction

This part of the research comprises the techniques and approaches that helped to answer the study questions. It focuses on variables and indicators and sample, as well as analyzes reliability and validity of the study, data collection and analysis methods. Finally, in the end of this chapter limitations of the study are noted.

3.2 Revised research questions

Despite the fact that initial research question and sub questions have not been changed after the theoretical framework, below we provide them once again to enable the reader to follow the study. The main question of the research is:

- **Can selling of development rights increase the revenue source for the local government so that it can help finance infrastructure?**

Sub-Question:

1. Is it possible from the legal perspective?

- What are the property rights and does it include the right to develop?
- Can the development rights be separated from property rights and treated individually?

2. Is it possible from the market perspective?

- Does the development right have a value?
- Does selling them raise enough income to finance the infrastructure?

3. Is it possible from the administrative perspective?

- What is the process, how land price is determined and how is it captured?
- To what extent do land value capture instruments compliment financing infrastructure?

3.3 Research approach and techniques

The subject of this study is Tbilisi city where development rights are sold by the City Hall. Research is qualitative case study with the combination of exploratory and explanatory research. Explanatory because it explains the system of SDR - how the initial fee for building permits, as well as the value of extra floor area is calculated. Exploratory, as this research tried to reveal the issues related to property rights, market related issues, explore the alternative way to acquire extra density, decision making process and finally whether DRs could have financed or can finance the infrastructure. Technique of interviews was intended to be a source of the primary data, but observation as a technique was also used as we found it necessary during the field work. As for the secondary data - laws, regulations, court judgments, building permit databases, database of payment for extra development rights as well as the budget of the city were considered.

3.4 Operationalization

Table 3.1: Variables and indicators

Research sub questions	Variables	Indicators	Sources
What are the property rights and does it include right for development?	<ul style="list-style-type: none"> • Bundle of rights; 	<ul style="list-style-type: none"> • Right to occupy, use, enjoy; • Right to harvest; • Right to restrict; • Right dispose; • Right to posses; • Right to improve and develop; 	1. Secondary data : <ul style="list-style-type: none"> • laws, • reports, • regulations; 2. Primary data <ul style="list-style-type: none"> • Interviews
Can property rights be separated and treated individually?	<ul style="list-style-type: none"> • Separation of rights; • Right for Development; 	<ul style="list-style-type: none"> • Treating rights individually; 	1. Secondary data analysis : <ul style="list-style-type: none"> • laws, • reports, • regulations; 2. Primary Data <ul style="list-style-type: none"> • Interviews
Do the Development rights have a value and is it enough to finance the infrastructure?	<ul style="list-style-type: none"> • Demand; • Value of demand; • Investment in infrastructure; 	<ul style="list-style-type: none"> • Number of Issued building permits, • Number of Square meters issued • Amount of money collected through 	1. Secondary data analysis; 2. Primary data analysis <ul style="list-style-type: none"> • Interviews • Observation

		selling development • Amount of money spent on infrastructure projects	
What is the process, how the price for land is determined and how is it captured?	• Land price; • Zoning; • System of special zonal permit;	• Price of land per square meter • Land use;	1. Secondary data analysis; 2. Primary data analysis: • Interviews • Observation
Can selling the development rights fulfil the objective to finance the infrastructure?	• Value capture; • Revenue; • Financing infrastructure;	• Amount of money collected from value capture instruments • Total amount of revenue; • Amount of money spent on infrastructure	1. Secondary data analysis; 2. Primary data analysis: • interviews

3.5 Selection of sample and the size

Selection of the sample was purposive as relevant and experienced people were selected to collect the primary data. It included officials from local governmental body (architectural department, urban development department, members of Tbilisi City Assembly, and members of the commission responsible for approving extra development rights) as well as experts and developers operating in the capital and have demanded building permits, asked for extra density and those who have not. As a whole 15 Interviews and 1 observation was conducted.

Additionally, database of building permits were used for analysis which included over eight thousand permits and over 400 cases demanding for extra development rights.

3.6 Data collection methods

Two main sources were used for collecting the data, such as primary (interviews and observation) and secondary.

Table 3.2: Primary data source

Primary Data	Body	Number Of interviews	Position of respondent
Interviews Local Government, Tbilisi	Architectural department	1 Person	Head of Architectural Department
	Urban Development Department	1 Person	Head of department
	Urban development Department	2 person	Specialist, Major specialist
Tbilisi City Assembly	City Assembly	1 person	Head of urban commission
Interview Specialist	Legal body	1 persons	Lawyer of Architectural Department in Tbilisi City Hall
Interviews with developers	Private developer companies	4 persons	General directors of companies
Experts Members of commission responsible for extra development rights	Urban Planners	2 persons	Urban planners
	Members of the commission	3 persons	members
Total Interviews		15 persons	

Observation was conducted in Tbilisi City Hall, during the meeting of commission responsible for extra development rights and development regulation plans.

Table 3.3: Secondary data source

Secondary data	Data Source
	<ul style="list-style-type: none"> • Constitution of Country; • Civil Code of Country; • Regulations; • Reports; • Budget of the city; • Court Judgments; • Database of building permits • Other databases

3.7 Data analysis methods

During the analysis, demand was determined after considering the amount of building permits and extra development rights as well as amount of square meters permitted. Location and use were estimated through the analysis of over 8 000 building permits - including years 2009-2011.

Budget of Tbilisi City was considered in order to collect the data showing the revenue from DRs, property tax and expenditure on infrastructure. Payment ratio of extra development rights was determined by taking into account over 400 cases. Technique of observation was used to see if alternative way to increase FAR is more demanded and if infrastructure is considered through decision making process.

3.8 Validity and reliability

Validity of the data of the research was assessed by using different techniques, such as – interviews, observation and secondary data analysis. Reliability was ensured, in some cases, by triangulation process as data provided was checked through the interviews with different stakeholders. Respondent’s answers were checked through observation and vice a versa.

3.9 Limitations of study

Tight time schedule was a limitation for the study as planned filed work took place in month of July when majority of people, in Tbilisi, were on vacations. It was risky to evaluate the programme in time when market was not quite efficient. Limitations concern the data provided by city hall as it comprised only years 2008-2011, in some cases 2009-2011 and in other cases data did not exist. During the research, language was not a limitation.

Chapter 4: Research Results and Analysis

4.1 Introduction

This chapter provides the discussion and analysis of the data which we were able to collect during the fieldwork held in month of July, 2012 in capital city of Georgia - Tbilisi. In the first part the legal issues are considered. We started with major document of every county - the Constitution to see how it determined the property rights. Constitutional Court Judgments are also cited as they interpret some parts of above mentioned document. Next we discuss the Civil Code of Georgia, which refers to the issues related to ownership and property rights.

Furthermore, "Regulation regarding use, development and regulation of territories of Tbilisi" is considered. This document was first published in 2001, emended in 2007 and in 2009 new regulation substituted the old one. We analyse in details the latest regulation but also refer to previous documents in order to make comparisons. This is where we discuss payment fee calculation for development rights.

Moreover, next part of the research considers regulation approved in 2007 giving developers possibility to buy extra development rights. During the analysis process we also found alternative way to get extra density. We assessed these issues by observation of commission responsible for granting extra DRs in order to reveal, whether alternative is more demanded or not. The results are provided and discussed.

Next, analysis data reflects the payment percentage ration for SDRs and finally, focusing on market perspective, demand is assessed by analysing volume of issued building permits, total approved Sq.M, their location and use, sum collected through SDRs, property rights and their correspondence with financing infrastructure.

4.2 Legal issues

First time we meet issues related to property rights in the Constitution of Georgia (approved in 1994) is in chapter 2, article 20:2. This part, which is referring to "Georgian citizenship, freedoms and basic rights", states that - no person has the right to access the house or other possession without the will of the owner (Parliament of Georgia 1994). Article 21:2, (the same chapter of the Constitution) emphasizes -that the property and right to inherit must be recognised as well as guaranteed. Constitutional Court of Georgia, by Judgment N1/51 of 1997 gives a better definition of the Article 21. In this judgment we read that property is fundamental part of human life and is basic for creating democratic society as well as social and legal state (Constitutional Court of Georgia 1997). Also Court emphasizes that, without property rights it is impossible to create democratic society and guarantees freedom of individuals as well as private ownership is centre of market economy

(Constitutional Court of Georgia 2007b). We also found one interesting decision made by the Constitutional Court which is similar that we found in Colombian case during the theoretical framework. The Decision states that, property rights come with the big social responsibility. The owner is the part of the society and is not only eligible to get good from it, but is also obliged to use his/hers property for the prosperity of a society as a whole (Constitutional Court of Georgia 2007a).

We now return to Article 21 of Constitution, which defines that above mentioned rights can be restricted for the purpose of social need. Expropriation of the property is permissible for social needs which are determined by the law or under the decision of the court and if there is the urgent necessity (regulated by Organic Law). Expropriation has to be done by paying “appropriate” compensation (Parliament of Georgia 1994). None of the documents we assessed - during the research - explained what is considered to be “appropriate compensation. “

Civil Code of Georgia became valid after three years from the date of signing the Constitution. We consider the second part of the document - the Law of Things/Property (National Legislative Bodies 1997).

Civil Code defines property as everything, including the benefits from any intangible property, which can be possessed, used or disposed by legal or natural persons and can be acquired without any restrictions unless it is prohibited by the law or controversies to moral standards. (Article 147)

Furthermore, Article 148 of the same chapter says that “things”¹⁴ can be movable or immovable. Whereas immovable things include land with its subsoil minerals as well as plants growing on it and buildings or any other structure which are firmly attached to the land (Article 149) and if the fruit of the tree or the bush falls in the parcel of the neighbour, than the fruit is owned by track that it fell on and the also the owner of the land may cut the brunches of the tree that extend to his property (Article 178).

It is interesting that even though Civil Code says that immovable property includes subsoil minerals, law of Georgia regarding the minerals emphasized that – it is the property of the State and is prohibited every possible action which directly or secretly violates the rights of property on minerals (Parliament of Georgia 1996). What is more important same chapter (Chapter 2) of “Law regarding Minerals” underlines, that property on land does not mean/does not give the right on minerals (amendment 22.04.2005 N1409) and permission granting to use or develop can be issued only by special license. BUT, this kind of permission is not requisite within the plot which is privately owned and is intended to be used for domestic activities such as – constructing underground buildings and for their exploitation. To summarize: Rights on minerals are owned by the government except for the privately owned property of which component parts cannot be separated without either demolishing or extinguishing the purpose of entire property or part of it (parts which are

¹⁴ Word “Things” in Civil Code of Georgia refers to property.

essential components¹⁵) and can only be individual object of the right in the instances which are prescribed by the law (National Legislative Bodies 1997).

Moreover, we consider the issues to ownership. Chapter two of the Civil Code focuses on possession (National Legislative Bodies 1997) and states that it is created through intentional acquisition of control (enjoyment) of the thing and only the person who conferred the interest of the possessory is deemed to be the owner (Article 155). Title Three of the same document emphasizes that - Owner of the property can freely use and possess the property (with the limits of legal or contractual restrains) as well as restrict others from using it and dispose thing if it is not violating the rights of the neighbours or any other third party or if it is not abusing the rights of ownership. (Article 170:1) The right of the owner also includes the ownership of essential parts of the thing (Article 117) and right of not using the property (Article 170:3) and if this non-use is prejudicial to interest of the public then law can put an obligation for maintenance or use.

Furthermore - Chapter Five of Civil Code, which is referring to “Limited use of the property belonging to other person”, is concerns the “Right to build”. This concept is nothing more than leasing system as it states that the parcel of the land can be transferred to another party for fixed period of time so that, he/she is granted with transferable right to erect on or beneath the parcel, as well as right to inherit, to alienate, lend or lease such right (building right). The right to build can be extended to that part of the land which is not necessary for construction but gives the opportunity for the better use of the building. And finally, duration of the right to build is negotiated between stakeholders and cannot exceed ninety-nine years (Article 233) but is the subject of expansion.

During the interviews with the lawyers, we found out that the concept of “Right to Build” made it possible to separate the rights and transfer it to other individual. And, as we saw in theoretical framework of this research, leasing is one of the ways to trade with development rights. Due to this we will analyze this concept in details.

Article 234 concerns “Giving Rise to Build” and states that the regulations concerning purchase of immovable things¹⁶, shall also apply to acquisition and creation of a right to build. The construction erected on the basis of building right becomes an essential part of right and is registered as a property of an individual who owns the right to build. Finally, after the termination of building right, the construction erected on the parcel becomes essential part of the land parcel. Next article refers to alienation of this right. Civil Code defines that if the agreement of the parties or consent of the property (land) owner is needed for leasing or for alienation of the right to build, the owner can/may refuse to give such approval only in case the sufficient grounds exist.

¹⁵ Essential components of land parcel include structures that are firmly attached to a land and are not for temporary use (article 150:2) (National Legislative Bodies 1997)

¹⁶ Purchasing the immovable things is governed with the law that has to be the same to purchase the right to build. Chapter 3 of the civil code (Article 183) states that in order to buy the immovable property, it is necessary to create written agreement between the parties and register it in the Public Register.

Next we discuss in brief the payment for leasing (Article 236), termination of the right to build (Article 238), termination of a payment for right to build (article 239) and succession in title at the termination of the right to build (article 241).

The owner of the right to build can be obliged to pay the compensation and in case of non payment of the fee within two years, leasing can be terminated. Parties concerned can determine the sum of compensation for ten years, but in cases of essential economic condition changes, they are obliged to renegotiate the price. “Right to Build” can be terminated only with the consent of the owner and not in case of collapse of construction erected on the land parcel. After expiration of this right – if the compensation has been paid - land owner should pay adequate compensation for building that was erected during the leasing period. The compensation cannot be less than two third of total construction value. After expiration, lease owner cannot remove constructed object or any other component parts thereof and the owner becomes a party with whom “building right” holder had an agreement with.

In 2009, Tbilisi city assembly approved regulation concerning the use, development and regulation of the territories. This regulation substituted previous rules valid since 2001 and referred to the same issues. We will discuss the latest regulations, but in some aspect we will make comparison to see how the regulations were changing.

4.3 Implementation

The objective of above mentioned regulations (as defined in chapter 1, article1:2) (Tbilisi City Assembly 2009) is to:

- Regulate the process of development of immovable property, their use and changes;
- Establishment of specific conditions for the use of the land for construction activities.

The use of territories of Tbilisi City and the rules of development regulations also include¹⁷ - (1) conditions for determining documents for land use planning for Tbilisi City, (2) the use and development conditions for the capital city’s territories, (3) The use and development of territories with special conditions their rules and (4) erection of construction on the plot of land(s), determination of maximum height and rules on invasion of parts of construction in public space.

We consider Chapter IV of this resolution as it focuses on documents of legal zoning. It is defined as – variety of legal zoning map which determines possible variety of subzones (determined by resolution we are considering) and use and development of their territories.

¹⁷ It is also important to notice that chapter two of the resolution defines the priorities for city development of Tbilisi and is set to rationalize the existing development territories as well as increase in efficiency.

Paragraph 7 of article 8, concerns zoning and states that this part is referring to land use of specific areas and includes:

- Development coefficient of the land parcel (K1);
- Development intensity coefficient of land plot (K2);
- Greenery coefficient (K3);
- Distribution of land parcels on planning territory;
- Lines of development regulation (red lines¹⁸);
- Compulsory lines for development (blue lines¹⁹);
- Schemes for distributing constructions on land parcel.

Moreover, on the single land parcel - regulation has to include major parameters, such as: (1) maximum coefficient for development of the land, (2) maximum intensity coefficient and/or maximum height of development, (3) maximum coefficient of greenery. It may also include: (4) maximum level/height and volume of development, (5) minimum and maximum size(s) of land parcel, (6) development regulation lines (red lines), (7) compulsory lines for development (blue lines) (8) number of parking lots, (8) conditions for spatial planning of development (for example: determination of height of the buildings, type of covers for the buildings...) and (9) other parameters (Tbilisi City Assembly 2009).

It is also important to give the definition of the coefficients and see what this definition comprises. As mentioned, zoning determines three coefficients. Coefficient for development of land parcel (afterwards K1) - is the maximum index of the area of the ground floor (which is touching the land) of the building compared with the total area of the plot. If the construction does not have the ground level, then K1 is determined according to the first level of the building. To say simply, the calculation is based on the footprint of the construction. Calculation of K1 has also exceptions. It does not comprise:

- Underground spaces;
- Temporary buildings;
- Courtyards which are covered by transparent material” winter gardens”, and “passages”;²⁰
- Agricultural buildings (one level), as well as green houses.

Unlike the regulation of 2001, new regulations increased the exceptions list. According to the regulations of 2001 only the underground parking areas and auxiliary spaces were exceptions (Tbilisi City Assembly 2001). With the amendments of 2006, above mentioned exceptions were added (amendment 31.03.2006; N4-21).

Now discuss the development intensity coefficient (afterwards K2), which is similar to FAR concept. According to the definition K2 is the ratio of maximum floor area of above

¹⁸ Red lines – imaginary boundary (which is determined by development document) within which the building has to be erected (Tbilisi City Assembly 2009).

¹⁹ Blue lines – imaginary boundary (which is determined by development document) on which building has to be erected (Tbilisi City Assembly 2009).

²⁰ Together with these aspects, construction cannot occupy more than 80% of the land parcel (Tbilisi City Assembly 2009).

ground space that can be build, towards total plot area (Tbilisi City Assembly 2009). This definition shows that all underground space that can be built is excluded from calculations. According the law It is calculated by outer outline of the building including the staircase and the elevator space. Together with underground space, there are other aspects which are not considered while calculating intensity coefficient. Such as:

- Balconies and terraces;
- Incomplete storey²¹;
- Only ½ of the area of mansard, if it is complete storey²², is included in calculation;
- Incomplete storey mansard is not included in calculation;
- Access road for the car in the building;
- Only ½ of the area of veranda²³;
- Agricultural purpose auxiliary buildings;
- Green houses;
- Above ground parking space.

Compared to 2001, in this case also, exceptions have increased. In 2001 regulation only the balconies and terraces were not included (Tbilisi City Assembly 2001), by the amendment of 2006 this list was extended- staircase areas, elevators and hall areas were added to the list of exceptions (amendment 31.03.2006 N4-21).

There is also third coefficient which is greenery coefficient (K3) and which determines the ratio of the plot that has to be left free for green area and does not have to be covered or have any underground construction beneath (Tbilisi City Assembly 2009).

Intensity coefficient differs from one location to another and is determined by functional zones²⁴. Regulation determines 10 zones which are: (1) landscape-recreational zone, (2) agricultural zone, (3) recreational zone, (4) special zone²⁵, (5) residential zone, (6) transport zone, (7) public-business zone, (8) industrial zone, (9) sanitary zone and (10) military zone (Tbilisi City Assembly 2009). If we will look at detailed functional zones, they are even more. Regulation mentions 24 zones.

Table 4.1 shows the full list of functional zones as well as maximum coefficients applied to them through period 2001- 2009. Some of the cells in this graph are not defined because, (1) in 2001 and 2007 the number of specific zones where less and (2) some of the zones do not have coefficients but height of construction or use is determined for them.

²¹ Incomplete storey- floor that has the height from 1,8 meters to 2,4 meters (Tbilisi City Assembly 2009).

²² Complete storey – floor that has the height on 2,4 meters and above (Tbilisi City Assembly 2009).

²³ Veranda – differently from terrace, verandah can have glass barriers from 2-3 sides (Tbilisi City Assembly 2009).

²⁴ Functional zone - Part of city planning regulation which determines the use of city territories (Tbilisi City Assembly 2009).

²⁵ Special zone - zones where it is permitted to construct educational buildings, medical centres, scientific-research centres, industrial buildings, warehouses and (in special zone 2) cemeteries

Table 4.4: Functional Zones and attached coefficients

Functional Zones	2001			2007			2009		
	K1	K2	K3	K1	K2	K3	K1	K2	K3
Landscape-recreational zone	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Agricultural zone	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Recreational zone - 1	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Recreational zone - 2	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	0.2	<i>n/d</i>	<i>n/d</i>
Recreational zone - 3	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	0.3	1.0	0.5
Special zone	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Residential zone - 1	0.4	0.6	<i>n/d</i>	0.4	0.6	<i>n/d</i>	0.5	0.8	0.3
Residential zone - 2	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	0.5	0.8	0.25
Residential zone - 3	0.5	1.3	<i>n/d</i>	0.5	1.3	<i>n/d</i>	0.5	1.5	0.2
Residential zone - 4	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	0.7	<i>n/d</i>	0.1
Residential zone - 5	0.5	1.8	<i>n/d</i>	0.5	1.8	<i>n/d</i>	0.5	2.1	0.1
Residential zone - 6	0.6	2.2	<i>n/d</i>	0.6	2.2	<i>n/d</i>	0.5	2.5	0.1
Transport zone - 1	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Transport zone - 2	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Transport zone - 3	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Public-business zone - 1	0.7	3.0	<i>n/d</i>	0.7	3.0	<i>n/d</i>	0.7	3.5	0.1
Public-business zone - 2	0.8	4.0	<i>n/d</i>	0.8	4.0	<i>n/d</i>	0.7	4.6	0.1
Public business zone - 3	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	0.7	<i>n/d</i>	0.1
Industrial zone - 1	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Industrial zone - 2	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Sanitary zone	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Military zone -1	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Military zone - 2	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Forest zone	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>

Source: Nemsadze,2012

n/d - not defined by regulation

If we will look at residential zone - 4 in 2009, it is lacking K2 coefficient but the regulation of 2009 says that building does not have to exceed 3 storeys or in Public-Business zone - 3 , where maximum height of the construction is mentioned which equals to 15 meters (Tbilisi City Assembly 2009). On the other hand we can see that compared to

2001, in 2009 intensity coefficients for several zones have increased. For “Residential Zone 1” - from 0.6 to 0.8, for “Residential Zone 3” from 1.3 to 1.5, for “Residential Zone 5” and “Residential Zone 6” increase equals to 0.3, for “Public -Business zone 1” intensity coefficient raised from 3.0 to 3.5 and from 4.0 to 4.6 for “Public -Business zone respectively”. Changes are traced also for K1 coefficient.

In order to explain the table and analysis provided above more clearly, we will use the existing case. Developer wanted to build in the zone public-business zone 2 within the plot of 410 Sq.M in total. This means that, on this parcel of the land he could construct 287 of first floor of the building as K1- equals to 0.7. Formula is provided below.

Formula 4.1: Formula for calculating development potential on land parcel

$$K_1^1 = L * K1$$

Where:

- K₁¹:** Development potential on land parcel;
- L:** Total area of land parcel;
- K1:** Normative coefficient;

In order to start the construction the developer has to pay the fee which is determined by the “Law of Georgia Regarding the Local Fees”. The law states that fee is calculated on the basis of the area of the first floor of the building which is occupying the plot multiplied by 1 GEL²⁶ (0.50 cents); for industrial building construction in the coast area – X 5 GEL (2.5 EUR) (State Government of Georgia 1998). This means that while calculating K1 coefficient, developer gets actual size of development and the fee he has to pay for this right. In our case the fee comprises 287 GEL (143.5 EUR)²⁷.

As mentioned, in order to evaluate for the developer how big the construction can be, K2 coefficient should be assessed. The case we are discussing has normative intensity coefficient of 4.6 meaning that in total 1886 Sq.M can be built. Formula for calculation is shown below.

Formula 5.2: Formula for calculating intensity of development

$$K_2^2 = L * K2$$

Where:

- K₂²** development intensity;
- L:** Total area of land parcel;
- K2:** Normative coefficient of development intensity;

²⁶ Here and afterwards exchange rate for GEL towards EUR is equal to - 1 EUR=2 GEL

²⁷ Value is average as it does not include exemptions

In 2007, the amendments to the “Regulation concerning the use, development and regulation of territories of Tbilisi” were introduced. This amendments state that (amendment 6.09.2007 #10-52) normative intensity coefficient can be increased and is regulated by “Resolution N7-21, On approval of instructions on determination and payment of rates of fee for issue of Special (Zonal) Permits in the territory of Tbilisi”²⁸. We were asking developers if they were aware of this amendment or if they took part in decision making process. All four developers stated that they were not aware of the initiative of the government, as the decision was made rapidly, without any public discussion or questions regarding SZP. Same answer was given by both urban planning experts.

4.3.1 Extra development rights

Issue of Special Zonal Permits (SZP) makes it possible to increase the limit of development intensity coefficient (Tbilisi City Assembly 2007). The fee rate is determined by the formula.

Formula 6.3: Formula for calculating fee for Special Zonal Permit

$$X = \frac{L(K2^1 - K2^2)}{K2} S$$

Where:

- X:** The fee rate;
- L:** Normative price of 1 Sq.M land;
- K2¹:** Development intensity coefficient granted under SZP for the land plot;
- K2²:** Development intensity coefficient established for the parcel of the land including 20% free increase margin;
- K2:** Development intensity coefficient established for the parcel of the land;
- S:** Surface of the plot of land under construction

It is also important to look at the exceptions that are provided by the SZP regulation. It states that the fee does not have to be paid when:

- new parameters do not exceed the actual/ initial coefficients;
- the term of building permit has expired and is renewed;
- the intensity of the development does not increase by no more than 20%;

²⁸ Full version of the regulation is provided in Annex 2

- legal entities or individuals take down the construction which height of the story is less than 2.7 from the floor to the ceiling, have no elevator and which term of operation was determined of maximum 50 years;
- on the construction plot the apartment house (4 storeys or more) and its independent annex of frame type together with foundation is taken down;
- depreciated apartment (4 storeys or more) is taken down from the construction plot.

During the interview with the lawyer we also obtained information that only the property owner or a person to whom the property is leased to, can ask for Special Zonal Permit and when permit is issued it becomes initial part of immovable property, meaning that SZP gets attached with plot of the land. Even if, later, the construction on the land parcel is demolished, the new permit will allow already increased intensity. Also it is important to note that, if party concerned increases K2 and uses 20% free margin, in case of second demand on the same construction, free margin will not be valid any more. Furthermore, local government officials (head of architectural department, head of urban development department) explained why developers - if they take down specific constructions - do not have to pay the fee. They were underlining that houses and frame annexes were constructed during the period when Georgia was part of the Soviet Union and these kinds of buildings have bad living conditions. For this reason they propose developers that if they demolish such constructions, in return they will get as much coefficient as they need for free. Unfortunately, we were unable to trace any such case. We used word “as much” because through interviews (we asked the same question to all the respondents) we also revealed that no maximum coefficient is set and the highest ever approved equalled to 11.6.

In order to make the use of SZP formula more clear, we will assess it with the case mentioned above where developer after paying initial fee for development was getting the right to construct up to 4.6 density. But he was not satisfied and was demanding K2 increase up to 7.2. Location of the land parcel was central and normative price for 1 Sq.M of the land was 1000 GEL (500 EUR). Calculation is as follows:

$$Rate = \frac{1000 * (7.2 - 5.52)}{4.6} 410 = \frac{1000 * 1.68}{4.6} 410 = 365.2 * 410 = 149732$$

From this calculation we can see that in order for developer to increase intensity coefficient up to 7.2, he had to pay 149,729 GEL (74.370 EUR) or, to say it other way round, increased his whole construction cost by 51 GEL (25.5 EUR) per Sq.M.

Another point we found out through analysis of the regulation is that, it defines the maximum amount of the fee/surplus which equals to 400 Gel (200EUR) (Tbilisi City Assembly 2007) meaning that no person can be charged more than mentioned amount per M² of additional construction area. This finding was unexpected for us because officials (head of architectural department, head of urban development department, member of Tbilisi city assembly) as well as developers (all four of them), while questioning about the reasons of introducing the SZP regulation, were answering that one of the main objectives was to

increase the revenue source for the budget. But as soon as we were changing the question and stating that if the reason was to increase the income, why did they set maximum amount to be paid, or why did they set fixed normative coefficient in some areas to 4.6 and additionally gave the developers 20% free increase margin, some of them (head of architectural department, member of city assembly) quickly changed their answers and stated that the goal was to promote the development. Furthermore, normative price for calculating the surplus loses its sense. Even if the prices will be updated to very high value, total income cannot increase as the cap is set.

Normative prices of the land were updated only twice from the year 2007 - in 2009 and in 2011. In all other years prices were kept the same as in the previous year. It is responsibility of Tbilisi City Assembly to approve the prices every year at the end of the January or early February (based on interviews with lawyer and member of Tbilisi City Assembly), but they can keep them unchanged. It is important that latest update (2011) of normative land values are more detailed as it now includes 180 zones (Tbilisi City Assembly 2011) compared to the year 2009 when only 59 zones were specified.

Another issue that regulation defines is that payment for SZP has to be done when the building permit is issued (Tbilisi City Assembly 2007). This is how it was done from the start of 2008. BUT! Amendment of 2009 says that the surplus for Special Zonal Permit, issued until 1 January 2011 (later this date was also changed to 1 January 2012) has to be done within one year after the issuance of the relevant building permit, according to the schedule provided by concerned person, but not later than commissioning building or the structure (Tbilisi City Assembly 2007) (Amendment 28.12.2009 N15-59). This amendment, as our respondents were saying (urban planning experts, developers) led to more flexibility for the developers as they can extend the building permit and same time payment period for SZP. But there is even bigger problem created by amendment that will be discussed later in this research and which concerns to payment for Special Zonal Permits.

Again we return to the interviews. When we asked about the reason for introducing SZP regulation, 3 developers out of four underlined that before 2007 there existed other ways to increase the intensity. First system that existed, by the words of one of the developers, was called "bribing". Afterwards, by first amendment in 2001 "Regulation regarding the use, development and regulation of territories of Tbilisi, government "legalised" the system of acquiring intensity and this system - which is still working- is seen by developers, experts, specialist of Urban Development Department, as an alternative to Special Zonal Permits.

4.3.2 Alternative to SZP

When we asked our respondents if the alternative to buying the extra development rights existed, mainly all of them (10 out of 15 respondents) pointed to the system of changing functional zones. As respondents said it is the way - established by law – according to which on the specific territory developers can make, what is called, new Development Regulation Plan (afterwards DRP) and increase the intensity. To say it simple, with this system parties concerned can change one normative space (with low K2) with another one (with higher K2) and they do not have to pay the difference of coefficient

through this change. One of the respondents (major specialist for Urban Development Department) called it “disaster” as he said that DRP, in case of good support, is better way than SZP. One of the respondents (developer) even called this system - way of corruption. We cannot make a conclusion that in this case developers are bribing the officials as we have not found any prove of it, but existence of alternative for us was already a finding.

In regulation of 2001 we can read that maximum coefficients (k1 and K2) can be increased by providing detailed planning project (Tbilisi City Assembly 2001) or, as it is referred in “Law of Georgia regarding spatial planning and City planning basics”, by Development Regulation Plan.

DRP has to include (1) detailed zoning map, (2) engineering part, (3) text part and (4) thematic part (Central Government of Georgia 2005). In this research, while discussing zoning, we already listed major parameters which zoning map has to include (please refer to page 36). Below we give the description 3 other parts of DRP.

1. Engineering part has to include:
 - Map of water pipe network on construction plot and their capacity;
 - Map of electricity supply network on the construction plot and their capacity;
 - Map of the natural gas network on the construction plot and their capacity;
 - Map of drainage system on the construction plot and their capacity;
 - Map of main and local roads on construction plot;
2. Text part has to include:
 - Description of Development Regulation Plan;
 - Explanatory letter of DRP;
 - Stages of implementation of DRP.
3. Thematic part has to include:
 - Thematic issues related to DRP. (regulation does not describe what is meant in it)

As we can see, differently from SZP where nothing is said about infrastructure, DRP requires considering infrastructure and its capacity. But the question is whether Municipality actually takes it account. Two out of three developers said that commission responsible for DRP and SZP does not consider all the above mentioned - what is important for them is the visual side of the project. On the other hand, government officials and members of commission stated the opposite, underlining that they are strictly complying with the law. Same attitude was towards the question when we asked if DRP cases were happening frequently. 2 Developers said that at least 10 such cases were approved in a week, while others (1 developer, member of Tbilisi City Assembly, Head of Architectural Department) said that increase of K2 through DRP contributed neglectable percent of all discussed cases. Moreover one member of the assembly said that the majority of the discussed cases were zonal changes.

The process of getting SZP or DRP is the same. Firstly both of them are discussed by the same commission called “Commission for use and development regulation of the territories”. If the answer is positive, the cases of SZP are returned to architectural

department which issues building permit in case all the requirements are met. DRP cases sent to Tbilisi City Assembly for approval. One of the main criteria for issuing the building permit is the maximum height of the building. As all 15 respondents told us, commission can grant extra development potential but height limitations can affect the project as it is the primary rule. Maximum height is also calculated through formula and is provided below.

Formula 7.4: Formula for height of the building

$$H=L / Y$$

Where:

- H:** Height of the building facade;
- L:** Perpendicular distance from the building to the half width of the road;
- Y:** Coefficient which is - 0.30 for public-business zones, 0.25 for industrial zones, 0.40 for all other zones

During the interviews we were also asking whether height limitations could be changed. Members of Tbilisi city hall, Tbilisi City Assembly and members of commission were stating that this rule was strictly followed. But we found 2 cases, through database provided by Tbilisi City Hall, out of 417 where these limitations were changed. In first case height of 15 m was changed to 23 meters and second, where database mentions only increased height to 15 meters. Major Specialist of Urban Development Department also answered the same question stating that cases with the request to change the height limitations do exist and sometimes, when it is in the interest of concerned parties, they are changed.

As we were getting confusing answers to our interview questions, we decided to somehow get a permission to attend and observe the meeting of the commission. We were lucky as municipality allowed us to attend last meeting - before holidays - which was held in Tbilisi City Hall.

4.3.3 Observation

From the beginning, responsible for extra development rights was Tbilisi City Assembly which included members from different departments of city hall as well as NGOs and concerned individual had to be ready to answer the questions regarding engineering and transport infrastructure. In 2004 this part of the article was taken out of the regulation and responsibility shifted from Tbilisi City Assembly to Tbilisi City Hall (interview with urban planning experts).

The commission meeting (which we were able to attend) included 6 members: Head of Architectural Department, two developers, Head of Department for Preparing Development Conditions for Construction of Land Parcel, member of Tbilisi City Assembly, and member of Urban Development Department of the Municipality. Unfortunately, commission does not include people responsible for the infrastructure, lawyers or urban

planners. Every present member got the schedule of the meeting stating that in total there were 34 cases to be discussed.

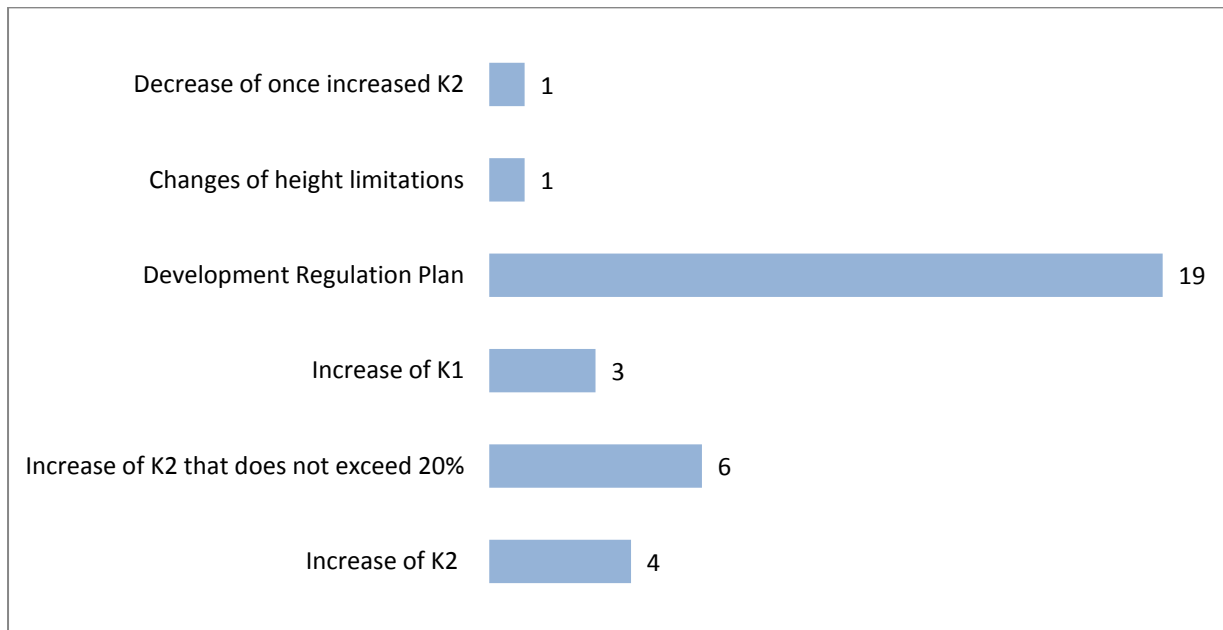
During the first part of the meeting, concerned parties were invited one by one by secretary to present their proposal. Before it, secretary was announcing the case and name of the person who had to present. 12 Cases were discussed in this manner.

First observation we made was that presenters were showing only the visual side of the projects, some of them just the plot of the land, stating that they “want” zonal change. Nothing was presented or said about the infrastructure or their capacity neither from the side of presenter nor from the members of the commission. It became more obvious that municipality was not considering infrastructure during the decision making process, when next 22 cases were discussed in 10-15 minutes. Not even discussed. One of the members of the commission was reading the list of the cases, at the same time stating whether it could be approved or not. Only one member, developer, was asking for more detailed information but majority of these questions were left unanswered.

First outcome of the observation was that no infrastructure, their capacity or their existence are addressed and taken into consideration. Furthermore (after observation), we started to ask whose responsibility is to provide the infrastructure. All officials pointed that it was responsibility of developers. We crosschecked this answer with developers and answers were matching. It is their responsibility to create the infrastructure within the plot, but unfortunately in many cases these requirements are not met creating problems in the city such as parking problem.

Chart 4.1 summarizes all 34 cases discussed.

Chart 4.1: Discussed cases during “Commission for use and development regulation of the territories”

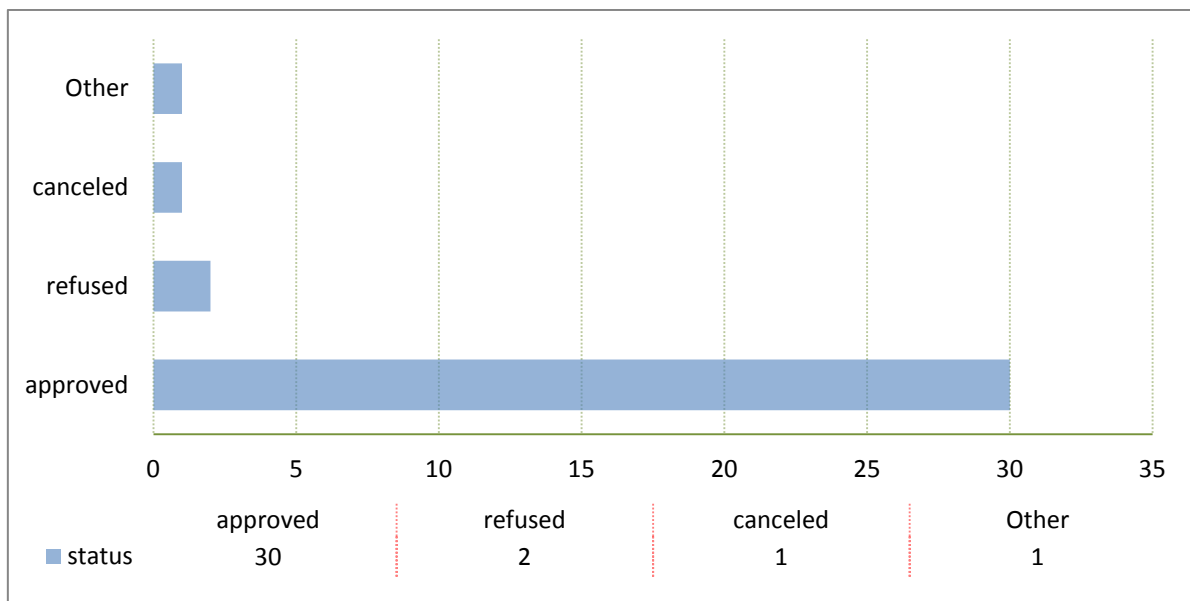


Source: Nemsadze, 2012. Based on observation of “Commission for use and development regulation of the territories.”

As we can see from the chart 4.1 19 out of 34 are DRP cases or to say differently, changes of the functional zones. In total 10 cases discussed were asking for SZP and, what is more interesting, six out of these ten were in the margin of 20% free increase. 3 parties were asking for changes in K1 coefficient while one asked for changes in height limitations. During the observation one case was another important finding for us. Developer who once increased the intensity coefficient, on this commission was asking to decrease it. It was approved without discussion. As we have later found, during the interview with developer, such case is not rare as our respondent himself (head of development company) several times asked to increase and afterwards - because of engineering problems - has refused to use it. In all this cases fee for SZP has not been paid.

Chart 4.2 shows that majority of requests (34 in total) were approved. Only 2 cases were refused with the reason of not providing complete visual side of the project, 1 discussion was cancelled due to not existence of concerning party and 1 case (which in table is marked as other) was not discussed because the calculation for SZP was not done correctly. Last mentioned case actually shows, that there are people - developers/individuals/concerned parties - who do not know the regulation. We also faced obstacles in understanding the formula for calculating rate of fee for SZP as official regulation provides it with mistakes. All these point out that regulation lacks simplicity.

Chart 4.2: Status of discussed cases during “Commission for use and development regulation of the territories”



Source: Nemsadze, 2012. Based on observation of “Commission for use and development regulation of the territories.”

This observation made us think in another direction. First, we got really interested if rejected parties had the opportunity to appeal and if any of cases have been taken to the court. We asked legal conflict questions to the lawyer of Tbilisi City Hall who said that, of

course everybody had the opportunity to appeal the case in the court but no such case was ever recorded. With the same question we addressed the developers who confirmed (2 out of 4) the possibility of appeal but also said that everyone who gets refusal avoids going to the court in the fear that all their projects would be refused by the City Hall in the future.

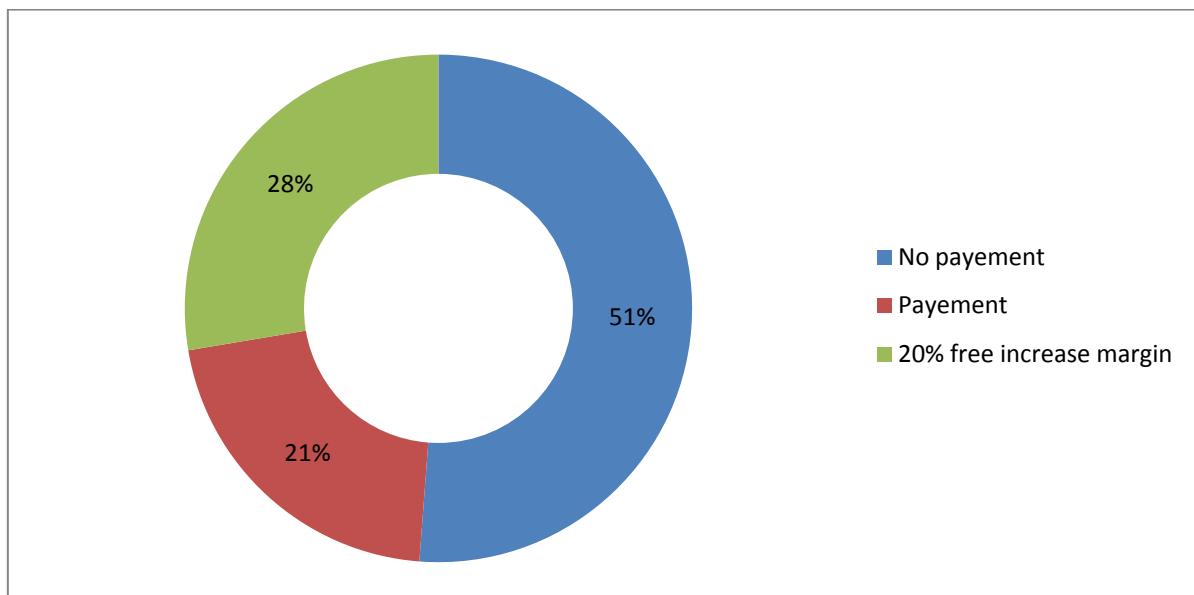
Another question that rose from observation was that, if developers can decrease already increased coefficient, if they have alternative of DRP, if they can pay for SZP with the schedule they provide themselves and also extend the payment period in case they extend building permit then do they actually pay for the Special Zonal Permits or not?

4.3.4 Payment for SZP

Our respondents were quite openly stating that “minority” of those who got Special Zonal Permit had paid for it (8 out of 15 respondents, 2 of them did not have information, 5 stated the opposite). Head of Urban Development Department stated that such number was near to 70 % while Head of Architectural department mentioned 60%. On the other side all three members of commission, who we interviewed, were saying that they were sure that money was going to the budget otherwise instrument was losing its sense.

We were able to get the database (from Tbilisi City Hall) showing 417 cases of SZP, including the years 2008 to 2012. We analysed them one by one to see the percentage of payments. Chart 4.3 presents the results.

Chart 4.3: Payment ratio for Special Zonal Permits



Source: Nemsadze, 2012. Based on analysis of 417 cases of SZP

Based on this analysis we can see that 51 percent have not paid for the increased intensity while 28 percent were in the margin of 20% free increase and only 21 percent did pay. Some of the reasons this happened we already mentioned. We were also asking if developers had the possibility to provide some services instead of paying the fee for SZP,

but we got answer that SZP can only be acquired by monetary purchase (Head of Architectural Department, Head of Urban Department, Member of Tbilisi City Assembly). The lawyer we interviewed also mentioned that in case of not using the building permit, developers are fully exempted from the fee. On the other hand member of Tbilisi City Assembly also noted that City Hall does not have the capacity to collect the money.

Furthermore, while talking with head of Architectural department, he noted that even though the regulation says that payment has to be done before commissioning building or the structure, in some cases City Hall has no other choice but to neglect it. By his words, because of financial crisis and war conditions in 2008 of Georgia with Russia, developers were unable to pay for SZP. On the other hand people, who had already bought the houses, were demanding their property putting the pressure on Municipality and because of it they were forced to postpone the payment.

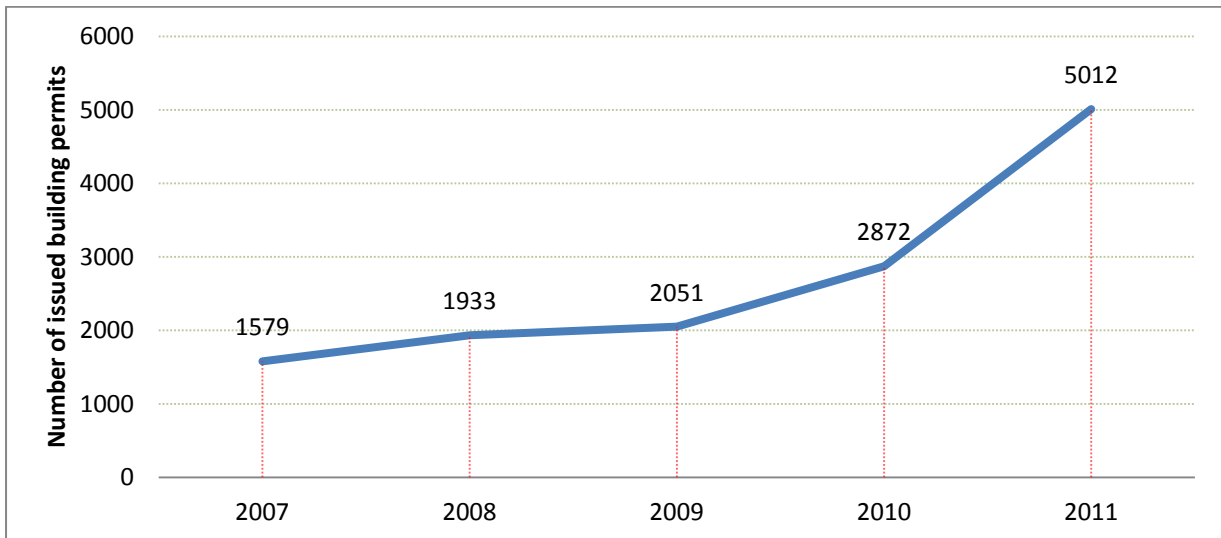
Moreover, in late July City Hall approved the amendment (not yet published but approved) by which all those developers who have asked for SZP until July this year and have not paid for them, will be fully exempted from such obligation if they will complete unfinished constructions or start and finish new construction until January 2014. Even though officials were saying that reason for this moratorium was to promote the development, for us it is more political decision. If we will closely look at the dates we will find out that City Hall introduced moratorium just before the elections of the new parliament (to be held in October 1st 2012) and end date of this exception is just after the elections of new President of Georgia (To be held in late 2013). The instrument that was introduced with the objective to increase the revenue for the Local Government became a tool to “subsidize” the developers and to fight for the votes.

4.4 Market perspective

In order to analyse the demand, we considered two main indicators - number of building permits issued and number of square meters allowed to be build by Tbilisi City Hall. We first conducted the interviews with the developers which included those who asked for development right, those who asked for SZP and finally those who never asked for SZP. Our first respondent was head of one of the biggest development companies in Tbilisi. When we asked whether company has demand for building permits, the answer was positive. This answer was also similar with other 2 developers. But when we started to question about SZP, the answers started to differ. In conversation, one developer said that he does ask for SZP whenever it is important to make the project economically feasible. Differently from other developer who has never asked for additional construction area with the reason that fixed normative coefficients were quite acceptable and “enough” for the company, and only the cases when they got increase was through DRP system. Only one developer was unable to answer to our question as he stated that his company, because of financial crises, went bankrupt. With the same question we addressed the officials from Tbilisi City Hall and Tbilisi City Assembly. All of them were stressing that number of issued building permits have increased and that the tendency is showing even the bigger rise. If we will look at the Chart

4.4, which is reflecting the number of issued building permits from year 2007 to 2011, we can see that number has been growing and in 2011 it reached 5012 permits (Data provided by Tbilisi City Hall).

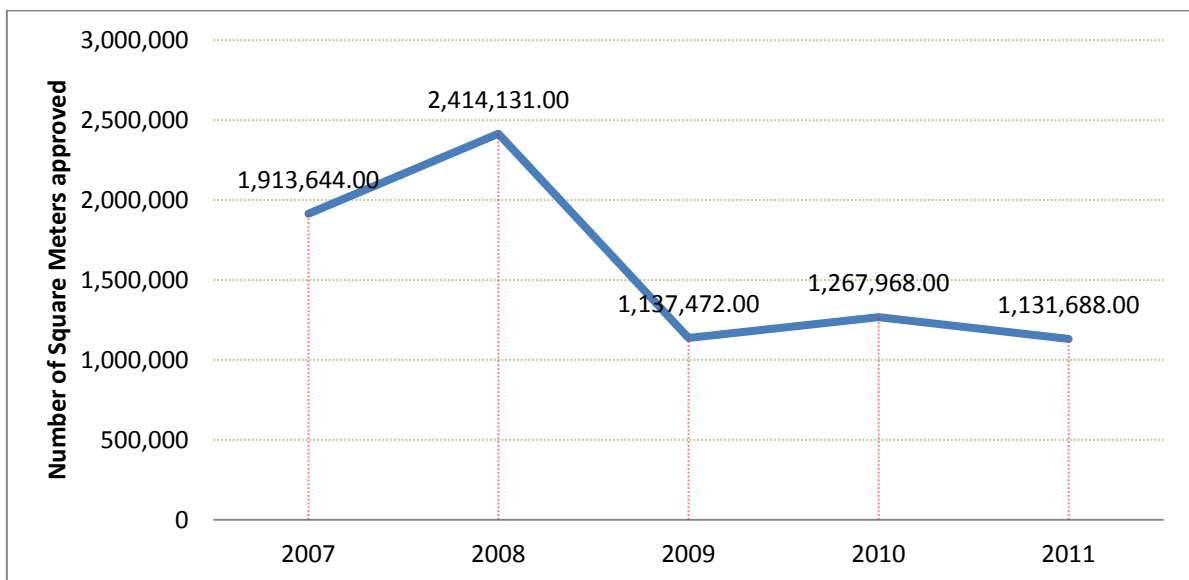
Chart 4.4: Number of issued building permits from year 2007 to 2011



Source: Nemsadze,2012. Based on the database provided by Tbilisi City Hall

Chart 4.4 also shows that increase in 2011 compared to 2008 (we chose 2008 as a comparison year as SZP mainly started to operate from this time) was over 159 percent. As mentioned, second indicator for us was number of permitted new floor area.

Chart 4.5: Number of permitted square meters from year 2007 to 2011



Source: Nemsadze,2012. Based on information provided by Tbilisi City Hall

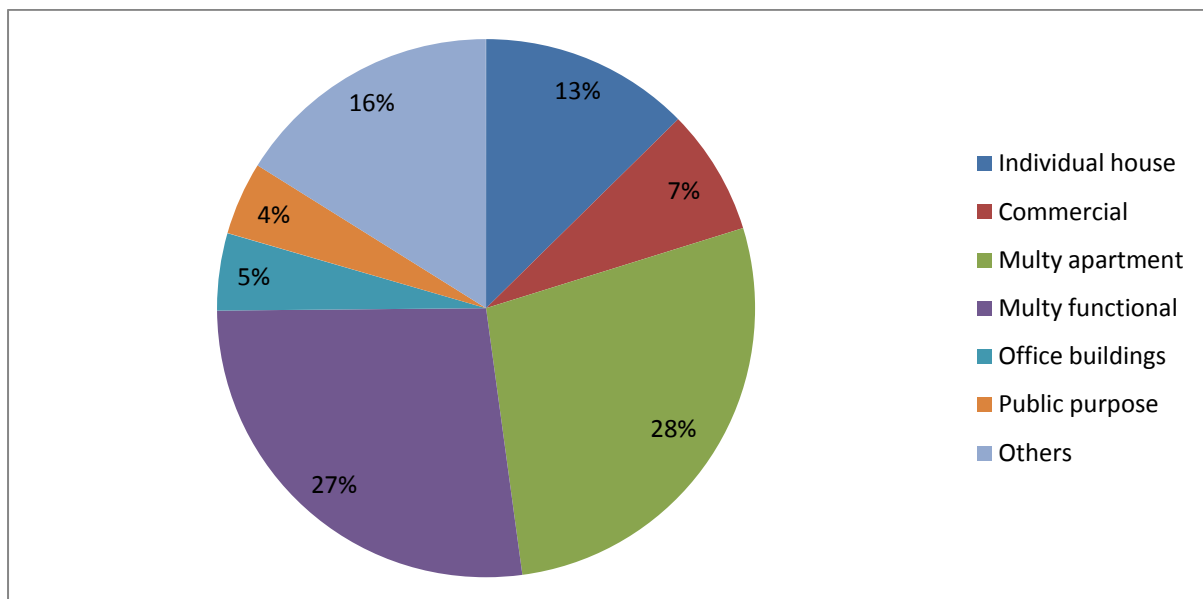
It is obvious that even the number issued building permits increased during this time period, number of floor area reduced. We see that in 2008 the number of approved square

meters was the highest (in comparison of years 2007-2011). In 2009 rapid fall is visible which by all our respondents is explained due to war conditions in 2008. Number slightly increased in 2010 but fell again next year. Compared to 2008, in 2011 number of approved square meters are decreased by more than 53%.

Furthermore, it became interesting for us to see to what use above mentioned building permits were reflecting. The data we managed to get from Tbilisi City Hall included years 2009 (only partly) to 2011. We analysed in total 8148 permits (352 from 2009, 2871 from 2010 and 4961 from 2011) and saw that, majority of the permits (79%) are issued for small reconstructions such as changing the frame of the window, changing the stare case, making the advertisement on the facade, creating the ATM machine and others. Individual houses were taking 13% of the whole while other uses like - commercial, multi apartment blocks, multi functional buildings and public purpose buildings - contributed from 1 to maximum 3 percent each.

But when we looked at the contribution of these uses to square meters (Chart 4.6), picture changed. Multi apartment and multi functional constructions have the biggest share (28% and 27% respectively), while individual houses make 13% and commercial 7%, office buildings 5%, public purpose only 4%. And finally, the small reconstruction projects take 16% of the total Sq.M..

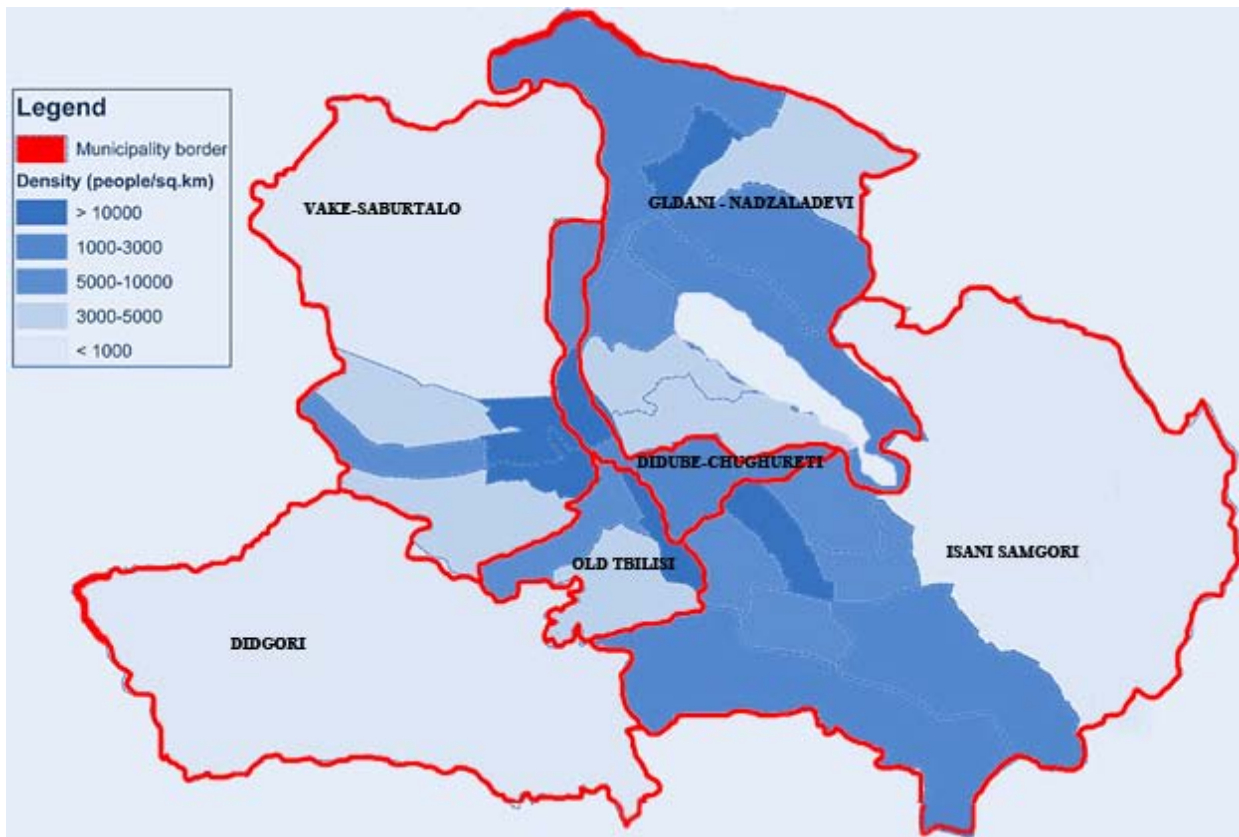
Chart 4.6: Correspondence of uses to square meters.



Source: Nemsadze, 2012. Based on analysis of 8147 building permits

In order to know development location through analysis of same amount of building permits, we made a Figure (Figure 5) which shows the administrative borders of capital city Tbilisi, their percentage ratios as well as concentration of population in this areas, density (Salukvadze 2010) ratio of percentage of issued building permits and approved square meters. Green cells in graph represent the highest percentage, red ones the lowest.

Figure 6.1: Administrative borders of Tbilisi, their area ratio, population concentration, density, ratio of issued building permits and square meters.



Source: Salukvadze, 2010

	Didgori	Vake-Saburtalo	Gldani-Nadzaladevi	Isani-Samgori	Didube-Chugureti	Old Tbilisi
Area Ratio	19%	20%	20%	34%	3%	4%
Population Ratio	1%	23%	30%	29%	8%	9%
Issued building permits Ratio	5%	31%	22%	18%	9%	13%
Approved Sq. M. Ratio	4%	45%	11%	17%	8%	15%

Source: Nemsadze, 2012. Based on analysis of 8148 building permits provided by Tbilisi city hall

Total area Tbilisi is 50.200.162 Sq.M. (Tbilisi City Hall 2012) with total population of 1,172.700 (National Statistics Office of Georgia 2012). Most dense area in Tbilisi is district of Didube - Chugureti with 7.855 persons per square kilometre (Tbilisi Municipality 2007). After expansion of the boundary of the city, Didgori district became the least dense area with around 30,000 inhabitants spread around the large area in different villages (Organization for Security and Co-operation in Europe 2011). Density map also shows that some areas of Vake - Saburtalo, Gldani- Nadzaladevi and Isani - Samgori as well as old Tbilisi are densely populated with over 10,000 people/sq.km. On average density in capital city is around 2,300 persons per square kilometre (Organization for Security and Co-operation in Europe 2011).

Old Tbilisi is one of the smallest parts of Tbilisi (occupies 4% of the whole territory) but takes 15% of the whole approved square meters (which is third highest), while Didgori's territory is 19%- with the smallest population ratio and smallest share for Sq.M (4%). The biggest share for building permits and sq.m goes to Vake-Saburtalo area, while Isani-Samgori (with 34% of area) ranks the second. Gldani-Nadzaladevu has highest population ratio (30%) but contributes to 11% of approved development area and finally, Didube-Chugureti (smallest area of Tbilisi- 3%) has only 8% of population and similar percentage of construction area.

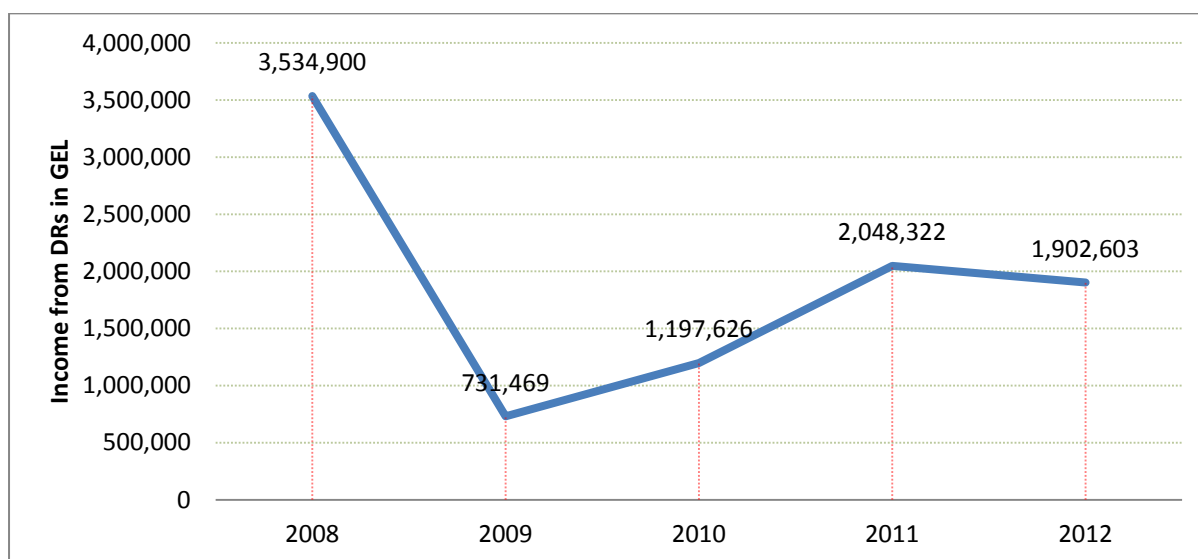
4.4.1 Income from development rights VS expenditure on infrastructure

Finally, in this part of the research we will analyse the income collected from development rights and its possibilities to finance urban infrastructure. Here it is very important to say that income from DRs, as our respondents told us (members of Tbilisi City Hall and Member of Tbilisi City assembly) is not earmarked for any specific reasons and they are transferred in general budget. Question why officials did not earmark it for any sector of infrastructure, was answered that the money collected is very low and it does not make much sense to earmark it. For the analyses we used the official budget documents of Tbilisi including the years 2008-2011 and planned budget of year 2012 (Tbilisi City Hall 2011). Chart 4.7 shows the income changeability.²⁹

As we can see, in 2008 income was highest through these years. Next year it declined dramatically. If in 2008 income equalled to 3,534,900 GEL (1,767,450 EUR) in 2009 number was only 731,469 GEL (365,735 EUR) which is 79% decrease. But following years increase in income (differently from number of approved square meters which more or less stayed on the same level as in 2009) is visible. Even though the income in 2011 (2,048,322 GEL = 1,024,161 EUR) is 42% less than in 2008, compared to year 2009 it has increased by 180%. And finally, planned income from development rights is 7,1 % less than in 2011, 46 less than 2008 but still 160% higher than in 2009. In total Tbilisi City Hall was able to capture 9,414,920 GEL (4,707,460 EUR).

²⁹ All the values presented are deflated to year 2008.

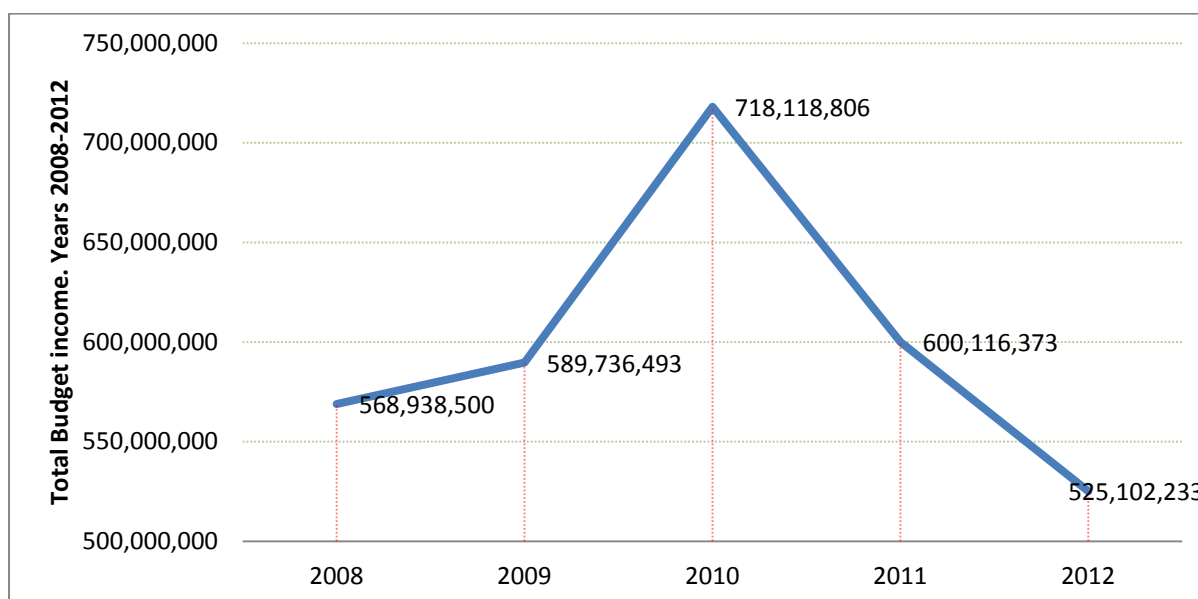
Chart 4.7: Income, in million GEL, from Development Rights through years 2008-2012



Source: Nemsadze, 2012. Based on analysis of Tbilisi City Budget

Picture is different when we look at total budget revenue. Income is highest in 2010 and the lowest in 2012 (Chart 4.7). By comparing Chart 4.7 and Chart 4.8 it is clear that income for development rights do not have big effect on total revenue. Reason for this is that, income from DRs contribute to only 0,31% of total revenue in the years 2008-2012.

Chart 4.8: Total Budget Income in million GEL



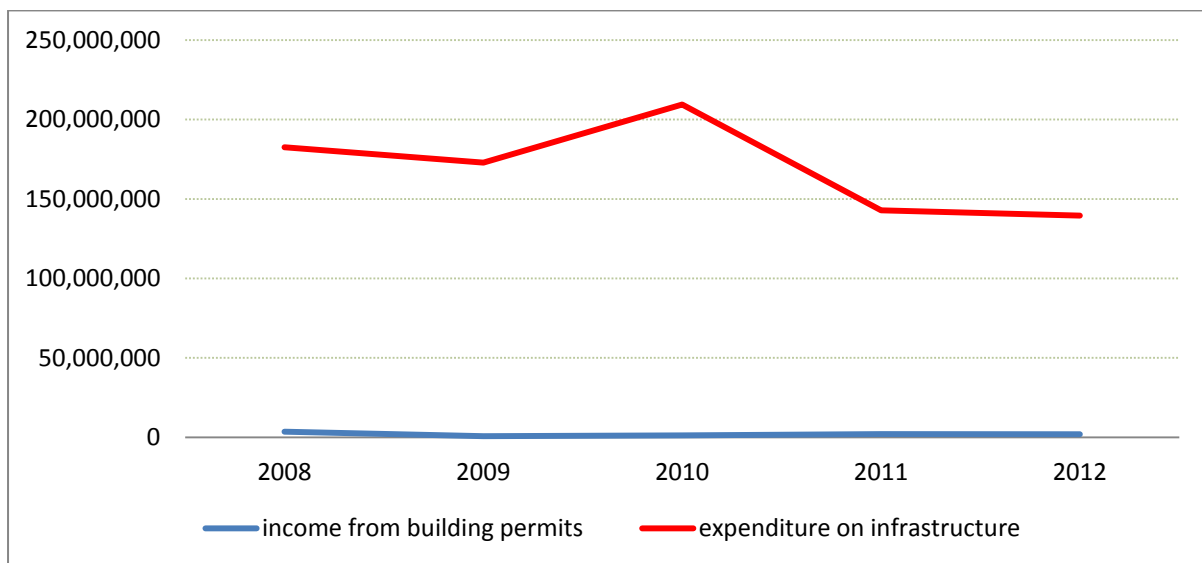
Source: Nemsadze, 2012. Based on analysis of Tbilisi City Budget

Next we looked at the expenditure on infrastructure, using the same budget documents. It was logical to see that highest year in terms of expenditure is in 2010 and the lowest in 2012. Expenditure increased by over 16% (from 2008 to 2010) while planned expenditure in 2012 is 23% less than in 2008. In total 837,938,184 GEL (418,969,092 EUR) was spent on

infrastructure and as we already know total income from DRs we can analyse whether they are capable to finance the urban infrastructure.

From Chart 4.9 we can see a huge gap between the money collected through selling the development rights and expenditure on infrastructure. Overall DRs contribute to only 1.12% of expenditure in years 2008-2012. Yearly contribution analysis of the data is as follows: 2008 - 1.97%; 2009- 0.42%; 2010 - 0.58%; 2011 - 1.45%; 2012 - 1.38%. This chart well corresponds to chart where we have shown the income through year. As in that case, here we can also see the highest percentage is in 2008 while the lowest is in 2009.

Chart 4.9: Comparison of total infrastructure expenditure to income from selling the development rights.



Source: Nemsadze, 2012. Based on analysis of Tbilisi City Budget

During the interview with the head of Architectural Department, we also managed to get estimated amount of money which has not been paid for intensity increase. Value of this number is 11,358,824 GEL (5,679,412 EUR). But this number is not high as it could have contributed to only 0.38% to total budget income and, if we combine amount of collected and not collected income, it could have financed only 2,50% of infrastructure.

In order to make this part of the research more specific- we have chosen 3 sectors in infrastructure, which are priorities for City Hall as we have found out during the interview with Head of Urban development Department, and made the comparison. These sectors are: (1) road rehabilitation, (2) city lighting network and (3) drainage network rehabilitation.

Through comparison of expenditures on these sectors to income from SDRs³⁰ we can see that it could have financed 3.88% of all road rehabilitation projects (year 2008-2011), or 14.85% of the city lighting network or what is more interesting 164.60% for the drainage rehabilitation meaning that, in case this money was earmarked for this specific sector, it could have fully financed it and even leave the surplus for future maintenance.

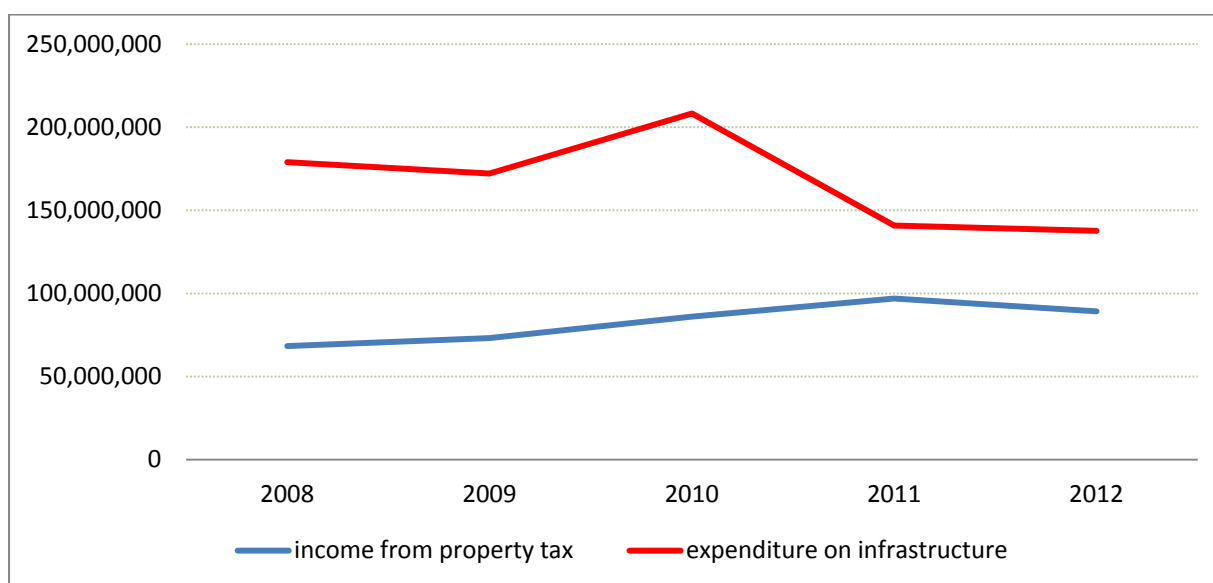
³⁰ In this case we only refer to amount of the money that City Hall managed to collect.

4.4.2 Property Tax VS expenditure on infrastructure

Furthermore, we look at property tax in order to answer the last question of the research and find out to what extent it can finance the infrastructure. Income from property tax (differently from DRs and other budget revenue) has been stably increasing from 2008. If we compare 2011 to 2008 we will see that during three years time it has increased by 41,78 percent. On the other hand, planned income from property tax in 2012 is 7,9 percent less than previous one but 30,5 % higher than in 2008. Total value of collected money (though analysis of budget) is estimated to 413,711,867 GEL (206,855,933.5 EUR) which contributed to 14% to total budget revenue. Chart 4.10 shows the comparison of total infrastructure expenditure to property tax where we can see that even the gap exists between expenditure and income, property tax is still more effective than selling the development rights.

Yearly contribution analysis is as follows: 2008 - 38.19%; 2009 - 42.49%; 2010 - 41.31%; 2011 - 68.83% and 2012 - 64.82%. it is interesting to see that property tax increase in 2011 could have contributed to 68.83% of that years expenditure on infrastructure. Overall property tax could have financed 49.37% of all the investments in infrastructure in comparison years.

Chart 4.10: Comparison of total infrastructure expenditure to property tax



Source: Nemsadze, 2012. Based on analysis of Tbilisi City Budget

Finally in this research, we make the same comparison as we did for SDRs. The infrastructure sectors are the same. Only difference is that now it is compared to income from property tax. All together, money spent on these sectors equaled to 314,528,209 GEL (157,264,104.5 EUR) meaning that revenue generated through the property tax could have fully financed road rehabilitation, city lighting network as well as drainage rehabilitation through years 2008-2011 and even leave the surplus for the City Hall budget.

Chapter 5: Conclusions, Recommendations and Future Study

Chapter includes conclusions related to the case study, gives recommendations and outlines topics for the future study.

5.1 Conclusions

This research aimed to answer the question whether selling of development rights can increase the revenue source for the local government so that it can help finance the infrastructure.

We address each sub question of the research.

Legal Part

Property right in Georgia, as defined by the judgment of the constitutional court, is major social responsibility as the owner is obliged to use it for the benefit of society as a whole. As well as it is fundamental part of human life and essential for creating democratic society, is centre of market economy and is guarantee for the freedom of individuals.

Ownership in Georgia consists of 6 major rights: (1) right to use, (2) right to possess, (3) right to restrict others, (4) right to dispose, (5) right to own the essential parts of property and (6) right not to use property. None of the documents we analysed were separately outlining the right of development as a part of the ownership. It differs from approach we considered through the theoretical framework where some authors mention directly development right as a part of the property rights (Walters, 2011), while others (Ostrom, 2009 and Bloumquist, 2012) did it indirectly, referring to right to manage. But on the other hand, we have seen that in order for developers to start construction in Georgia, they have to pay for such right to the municipality. In a way, we can argue, that in economic point of view concerned parties have to buy the right to develop.

Property rights can be separated. This is ensured by Civil Code of Georgia where chapter five discusses the concept of "Right to Build" which in its context is leasing system because given definition of the concept is the same as that we have seen while talking about the leasing system in theoretical part of this research.

Another very important issue that needs to be considered is that only owner of the land or a person to whom the land is leased can ask for Special Zonal Permit and link it to the owned territory. This approach makes selling the development right very simple in the sense of legal aspect.

If we ask whether selling the development rights is possible from the legal perspective - the answer is positive.

Administrative Part

Next we focus on administration where we found majority of the problems that Special Zonal Permits have. We already mentioned that fee is paid in order to get the permission to construct and it is calculated through footprint of the building multiplied by 1 GEL (0,50 Cents). This is first payment concerned party has to do in order to build up to fixed normative coefficient. But if he wants to create extra density he has to ask for Special Zonal Permit. Payment fee is captured by using the formula where one of the components is land price. Land price is normative price which is approved by Tbilisi City Assembly on a yearly basis. But the Assembly has also the power to leave the prices the same as previous year. Problems we see regarding this issue is that (1) from 1007 (after SZP regulation was introduced) normative prices of the land has been updated only twice in 2009 and 2011 and (2) regulation regarding the SZP also mentions maximum fee that can be paid for extra development rights per square meter and equals to 400 GEL (200 EUR)

While we were analyzing different approaches of trading with development rights, we listed (based on Pruetz, Standridge 2008) crucial factors that make the instrument work efficiently. We look back at these factors and link them to our case study.

- Special receiving areas - In majority of cases related to trading with development rights whether it is transfer, selling or donation - special areas are created where development rights are issued or donated. There are no such zones in case of Tbilisi. Every individual, no matter the location, can ask for density increase and in case of approval link it to the land he owns. As literature says, while creating receiving area considering the sufficient infrastructure for housing extra development is very important. In our case - as we have observed and got the information from respondents - it is not the case. Existing infrastructure and its capacity is not taken into consideration creating the problems for the city.
- Alternative - same literature says that alternative way to increase coefficient can lead to program fail. We found that alternative in Tbilisi does exist. System called Development Regulation Plan is a way which considers changing of functional zone, from less intensity to higher intensity. And this change is done without payment. What is more important such cases do happen and happen more often than increase through SZP. During the observation we traced 19 such cases out of 34 discussed.
- Certainty - Even though public sector cannot refuse SZP in case all the requirements are met uncertainty among the developers still exists. As during the decision making process the aesthetic side of the project is mostly considered, developers do not know whether commission responsible for SZP and DRP will “like” or “dislike” the project.
- Promotion - As we found out developers were not aware of new regulation as well as they did not know the advantages of it. And it is obvious that they do not see the advantages (only in cases when they can demolish buildings prescribed the regulation and get as much coefficient as they want for free) because the alternative - free way of density increase exists.

- **Simplicity** - Simplicity is final criteria we discuss. From our experience we can say that it took us several days, several phone calls to figure out what the formula for calculating rate of fee for SZP was saying in the regulation. We also met a person, during the observation, whose project discussion was canceled because of incorrect calculations, leading us to conclusion that regulation is difficult to understand.

To summaries - No special areas are implemented where development rights can be sold creating the problems in the city, SZP has an alternative and it is more demanded than instrument itself, decision making process is not very certain to developers and finally, even though Tbilisi City Hall now provides online calculator to calculate the free rate, still some people have problems in understanding issues related to SZP.

Additionally, exemptions provided by SZP regulation give flexibility to developers. Such as 20 percent free increase margin, that results in developers asking only up to this line. 28 % of total 417 permits, which we analysed, were such cases. Developers also have opportunity to provide their own fee payment schedule and they can also extend the building permit which automatically means extension of payment period with no interest payment and they can also decrease once increased coefficient. These three factors result that 51 % out of 417 cases have not paid the fee. Local Government lacks the capacity to collect the uncollected fee and moreover, uses the instrument for electoral vote fight as it introduced a moratorium for payment just before the coming parliament elections.

Even all above stated - the answer to a question whether is it possible or not from administrative point of view to trade with development rights - answer is that in general it is possible but it is not well implemented and is not efficient.

In administrative part we also asked to what extent land value capture instruments (in our case property tax) complement financing infrastructure. Revenue collected from property tax is higher than income from SDR. It could have financed over 49% of expenditure and fully cover all 3 sectors discussed in the research.

Market Part

Next we discuss market perspective. And firstly - the demand factor which is based on Pruetz and Standridge (2008) is most important factor for the instrument. We looked at the demand by considering the number of issued building permits and approved square meters. Even though the number has been rising for building permits, actual approved square meters have decreased through the comparison years. On the other hand, database provided by Tbilisi City Hall shows that around 100 cases exist a year asking for SZP. Also those cases have to be considered where extra density is acquired through alternative system. In one observation we saw 19 such cases. But even if we will assess at least 10 DRP cases a week (number was named by respondents during the interview), we will see that additionally over 500 cases are demanded which together with SZP cases make sufficient number.

Furthermore, the amount of the money captured municipality from Drs could only have contributed to 1,12 % of total expenditure on infrastructure in years 2008-2012 and even if they could have managed to collect the money from the developers who did not pay

for DRs, contribution could have risen only up to 2,50%. On the other hand, as we have seen, in case the money had been earmarked to drainage sector it could have fully financed it and even leave the surplus.

The answer to a question - do development rights have a value - the answer is yes because there is the demand. But, it does not raise enough revenue as five years analysis showed that SDR contributed to neglectable percentage of total revenue.

Finally we answer out main question of the research. Which is - **Can selling the development rights increase the revenue source for the local government so that it can help finance infrastructure? The answer is that - In existing situation, SDR cannot increase the revenue source for the budget as in 5 years time period contributed to only 0.31% of total revenue which is extremely low number. It could have financed neglectable percentage of the whole expenditure on infrastructure and cover the costs of only one specific sector.**

5.1.1 Recommendations

Based on the theory, our case study and conclusion we would like to give some recommendations.

1. We recommend local government to avoid the existence of the alternative system of density increase in order to achieve efficiency in revenue generation either by fully eliminating it or by introducing payment rate for DRP system.
2. For the same reason, the municipality also has to consider eliminating 20% free increase margin.
3. In order to increase the capacity of the revenue collection, payment of the fee for the SZP has to be done before issuing the building permit.
4. One time use of SZP is advisable. As it is done in Sao Paolo, Brazil where after demolishing the building for which intensity has been increased, process of acquiring extra density as well as payment starts from the beginning.
5. Local Government has to reject the cases where once granted increased coefficient is freely decreased.
6. Commission responsible for approving extra density has to carefully examine capacity of the infrastructure within the city area before making the decision allowing extra density, in order to avoid future problems in the city.
7. Local Government has to think about creating the special zones where extra development rights can be sold.
8. As normative price of the land is one of the main criteria to calculate the fee rate for SZP, it has to be updated more often.
9. Regulation has to be clearly designed, in order for everybody to understand it and not cause confusions.

10. In the regulation maximum amount of the money that can be paid for every additional Sq.M. of the construction area has to be eliminated not to reach the point when government will be unable to capture even higher value.
11. In case of second demand for intensity increase on once increased construction, local officials do not have to consider only the normative price of the land but the total value of the building right.
12. We recommend that the commission responsible for SZP and DRP has to also include lawyers, urban specialists and people responsible for infrastructure.
13. In case government will consider using collected revenue for infrastructure, it is advisable to create special account for the revenue for SDRs so that it does not go to general budget.
14. Also, we strongly do not recommend to earmark the money for specific sector of infrastructure or specific location to avoid the problems Sao Paulo faced when they managed to collect even more money that was needed and because of the regulation saying that it could not be spent on anything than on infrastructure in specific UO, government faced problems;
15. Finally, putting the maximum K2 coefficient in the city (in existing areas) is advisable.

5.1.2 Future study

For the future study it can be interesting to see what could have been the results if the constraints we identified during the analysis, have not existed. Interesting to estimate the value of all that cases that were in 20% free increase margin, amount of the revenue in case of no existence of the alternative system to increase density. Our hypothesis is that if payment had been done for all above mentioned cases or the government instead of introducing the moratorium was able to collect all the revenue, if special zones were created to house extra density or if the normative price of the land had been updated more often - than selling the development rights could have been more efficient tool for revenue generation as well as for covering the costs of infrastructure. Moreover, this research did not focus on impact of the instrument on the city. Knowing this can also become a good learning example for future development of Tbilisi city as well as for the region as a whole.

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Annex 1- *Interview guidelines*

	<i>Questions</i>
<p><i>Legal aspect</i></p>	<ol style="list-style-type: none"> 1. What are the property rights of land owners? 2. What is included in immovable property? 3. Civil Code of Georgia (Article 150) states that component parts of the property can only be individual object of the right in instances which are prescribed by law. Can you explain/elaborate it more closely? 4. Title Three of Civil code of Georgia states that owner of the property can freely use and possess the property as well as restrict others from using it and dispose it if it is not violating the rights of third party. Can you please tell me if this means that Civil Code considers property as a “bundle” of rights? 5. What about to dispose the property. Can you please elaborate it a little bit more? 6. Chapter five of civil code (articles 233,234 and 235) refer to right to build. In Article 234 we read that parcel of the land can be transferred to another person so that he or she is granted the transferable right to erect on or beneath the parcel. Does it mean that property rights can be separated and treated individually? 7. To refer to our last question, can individual stay the owner of the property while at the same time give other private owner the right to build? 8. In 2007 Tbilisi City assembly adopted a rule by which municipality is granted an opportunity to sell extra development right (special zonal agreement). Does this system had impact on property rights from legal perspective? 9. Have there been any legal conflicts? 10. Did somebody take refusal for SZA to the court? 11. Any other comments you would like to make?
<p><i>Market perspective (questions for public sector)</i></p>	<ol style="list-style-type: none"> 1. Is there a demand for extra density? 2. Can you specify the location where the demand is? 3. Can you tell me for what use is the demand? 4. Is demand to increase the densities? 5. Is the money collected from special zonal agreement earmarked?

Questions for private developers

6. If it is earmarked for infrastructure, do you also consider the physical location where it will be provided?
7. If it is not earmarked for infrastructure, how do you finance it?
8. If there is development from private developer, is there any obligation for them to provide public facilities?
9. What was the main objective while deciding to implement new rules regarding special zonal agreement?
10. Do you consider that money collected from trade of development rights is enough to finance the infrastructure?
11. What are priorities in Infrastructure?
12. How do you calculate the value for regular building permits? (is it per square meter?)
13. Can you refuse to issue SZA if developer complies with all the regulations?
14. If yes, what are the criterias?
15. If yes, have any of developers taken refusal to the court?

16. Do you have demand for increasing development potential?
17. If yes, is location important and why?
18. If yes, for what use do you have demand?
19. If yes, how much are you willing to pay?
20. If no, what is the reason?
21. When was the last time you asked for special zonal agreement?
22. Have you ever been refused to issue SZA?
23. If yes, can you appeal it?
24. Have you taken it to the court?
25. If yes, what was the outcome and if no why not?
26. Do you have exemptions while asking extra density?
27. What alternatives do you have?
28. While developing a project, are you obliged to upgrade/provide infrastructure?
29. If you are. Can you please tell me what kind of infrastructure? Is it inside the plot or outside?
30. If your developing plot is not near the road, is building connection road your obligation?
31. If yes, how do you deal with the land on which road has to go?
32. What do you think about SZA?
33. Any other comments you would like to make?

Administrative perspective

1. What was the main objective to introduce the system of trading with development rights?
2. Which countries example was taken into consideration?
3. Why was previous system of getting extra coefficient abolished?
4. Did you think from the beginning what would you spend money collected from agreement?
5. If yes, did you make any calculations and if not why did not you earmark the income?
6. Can you please tell me what is included in coefficient while making the calculations?
7. As defined in Resolution “On Approval of Regulations Concerning the use, development and Regulation of Territories of Tbilisi” adopted by Tbilisi City Assembly – in some zones maximum coefficient (for example in business zone) is 4.6 which is given for free. If your objective was to increase the revenue, why did you set the coefficient so high?
8. After adopting the above mentioned regulations, in few months Article “G” of Paragraph 4 was taken out. Can you please tell me what this article was referring to and why was it taken out?
9. In the same Regulation it is defined that payment of special zonal agreement is not paid if building does exceed 20% of given coefficient. Can you please tell what the reason for this exemption is?
10. If permission for building with special zonal agreement gets out of date without construction taking place, does agreement get out of date also or can it be updated without payment?
11. What other exemptions exist regarding the special zonal agreement?
12. What is the maximum coefficient one can get?
13. Calculation for special zonal agreement is done by using normative price of the land. Can you please tell me how often do you update the normative prices?
14. When was last, that normative prices of the land has been updated?
15. Do developers, who consider to create development have other alternatives except from getting special zonal agreement?
16. Does somebody get exemption for paying zonal agreement in case that they will do something in change? If yes what?
17. In regulations of 2007 maximum height limitations are also defined. How does it works and can it be increased? How?
18. While issuing special zonal agreement, do you consider existing infrastructure?
19. If yes can you please elaborate it a little bit more?

20. If you do not consider existing infrastructure, can you please tell me whose responsibility is it to upgrade/provide with infrastructure? Is it public sector or private developers?
21. What happens if after 50 years for which special zonal agreement was issued is demolished? Is it issued again by new payment or not?
22. After five years of implementing the regulations, do you think it is working efficiently in meeting its objectives?
23. If you think it is not efficient, can you please tell me what you think are major constraints and what has to be improved?
24. Do you want to make final comments?

Annex 2 – Resolution N7-21, On approval of instructions on determination and payment of rates of fee for issue of Special (Zonal) Permits in the territory of Tbilisi

Tbilisi Sakrebulo
Resolution N 7 - 41
June 29, 2007

On Approval of the Instructions on Determination and Payment of Rates of Fee for Issue of Special (Zonal) Permits in the Territory of Tbilisi

1. Pursuant to paragraph 5 of Article 5 and Article 12² of the Law of Georgia On Local Fees and subparagraph “f” of paragraph 1 of Article 12 of the Law of Georgia On the Capital City of Georgia –Tbilisi, to approve the instruction on determination and payment of rates of the fees for issue of special (zonal) permits in the Tbilisi territory, as per the Appendix attached.
2. The Resolution shall take effect on the fifteenth date following the promulgation according to paragraph 3 of Article 45 of the Law of Georgia On Normative Acts.

Sakrebulo Chairman

Zaza Begashvili

Instructions on Determination and Payment of Rates of Fee for Issue of Special (Zonal) Permits in the Territory of Tbilisi

1. Issue of special (zonal) permits implies the increase of the limit of coefficient of intensity of development under the rule established by the Commission of Affairs on Regulation of Disposal and Development of Tbilisi Territories (14.11.2008 N 13-28)
2. The payer of the fee for issue of the special (zonal) permit is an individual or legal entity which has received the special (zonal) permit in order to change the limit of coefficient of intensity of development.
3. The rate of fee is calculated by the formula:

$$X = \frac{L(K2^1 - K2^2)}{K2} S$$

Where:

- X: The fee rate;
L: Normative price of 1 Sq.M land;

- K2¹: Development intensity coefficient granted under SZP for the land plot;
- K2²: Development intensity coefficient established for the parcel of the land including 20% free increase margin;
- K2: Development intensity coefficient established for the parcel of the land;
- S: Surface of the plot of land under construction

4. The fee shall not be paid if:
 - a) within the construction development of the plot of land new parameters do not exceed the actual initial coefficients (K-1, K-2) and the use of the plot of land is not "improper";
 - b) the term of construction permit has expired and the project agreed under this rule has been renewed;
 - c) Deleted (26.11.2007 N13-68)
 - d) Special (zonal) permit provides the increase of the development intensity coefficient (K-2) by no more 20% (14.11.2008 N 13-28)
 - e) Individuals and legal entities as well as persons with another organizational and legal status (individual developers partnerships and so on) shall take down on the construction plot of land those houses which height of storey from the floor to the ceiling is less than 2.7 m, have no elevator and which term of operation was determined maximum of 50 years. (14.11.2008 N 13-28)
 - f) On the construction plot of land is taken down the apartment house (4 storeys and more) and its independent annex of frame type with foundation; (28.12.2009 N 15-39)
 - g) On the construction plot of land is taken down the depreciated apartment house (4 storeys and more) (28.12.2009 N 15-39)
- 4¹. This Instruction does not apply to the immovable monuments of cultural heritage and to those issues (objects) on which was issued the positive opinion of the Commission of Affairs on Regulation of Disposal and Development of Tbilisi Territories before the effective date of this Instruction (22.01.2010 N 1-1)
- 4². In case of issue of special (zonal) permit on the plot of land allocated for cooperative construction of dwelling, the fee is deemed as paid if the cooperative construction partnership disclaims the obligations undertaken by the state in connection with the cooperative construction (26.11.2007 N13-68)
- 4³. In case of increase of the coefficient of intensity (K-2) of development provided by subparagraph "d" of paragraph 4 above, by more than 20%, shall be paid the difference between the 20% development intensity coefficient (K-2) and the percent of the excess development intensity coefficient under the rule and in the cases provided by Paragraph 6¹ of this Instruction (14.11.2008 N 13-28)
5. The amount of fee, surplus, calculated per one square meter of the construction space shall not exceed 400 GEL.
6. The fee shall be paid in case of issue of the construction permit except for the cases provided by paragraph 6¹ (14.11.2008 N 13-28)
- 6¹. To pay the fee for the special (zonal) permit issued for the excess of the development intensity coefficient (K-2), before January 1, 2011 subject to the requirements of paragraph 4³ of this Instruction, in the term of one year after the issue of the relevant construction permit according to the schedule provided by the person concerned, but no later the commissioning of the relevant building or structure. This shall not apply to the cases provided by paragraph 6². (28.12.2009 N 15-39)

- 6². If the construction permit is issued before the effective date of this paragraph, the fee for special (zonal) permit issued for the excess of the development coefficient (K-2) shall be paid before January 1, 2011. *(28.12.2009 N 15–39)*
7. In case of increase of the development intensity coefficient limit the calculation shall be performed according to the relevant resolution of the Tbilisi sakrebulo *(22.01.2010 N 1-1)*
8. The fee shall be paid through the bank and it shall be placed in the full amount on the preliminarily specified account in the Tbilisi budget.
9. The responsibility for collection of the fee shall be undertaken by the municipal service duly authorized by Tbilisi Government. *(17.07.2009 N 8-19)*