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# **THE REFORM OF LAND DEVELOPMENT FEE IN SERBIA**

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**TABLE OF CONTENTS:**

<b>1. The current situation regarding construction land development in Serbia</b>	<b>3</b>
1.1. Legislative framework	3
1.2. Existing practice in construction land development in Serbia	5
1.2.1. Belgrade	5
1.2.2. Subotica	6
1.2.3. Paraćin	7
1.3 Effects of the existing system	8
<b>2. Need to Reform the Construction land Development Fee</b>	<b>13</b>
2.1. Reform of Local Public Finances	13
2.2. Privatization of Urban Construction land	14
2.3. Potential Privatization of Public Utility Companies	15
<b>3. Current situation in the world and the region</b>	<b>17</b>
3.1. United States	17
3.2. Bulgaria	20
3.3. Croatia	20
<b>4. Principles of the future system</b>	<b>23</b>
4.1. Efficiency	23
4.2. Transparency	25
4.3. Fairness	25
4.4. Investments and Economic Growth	26
4.5. Administrative Simplicity	26
<b>5. Possible options for reforming the land development fee</b>	<b>26</b>
5.1. Alternative mechanisms for utility infrastructure development funding	29
5.1.1. Impact Fees	30
5.1.2. User charges	32
5.1.3. Budget financing	34
5.1.4. Loans	35
5.2. Basic issues regarding the application of impact fees	35
5.2.1. Number of fees	35
5.2.2. Special purpose nature of the fee?	36
5.2.3. Fee differentiation and discounts	38
5.2.4. EU grants	40
5.3. Data required for collecting the fee	40
5.4. The method of setting the fee and rights to appeal	43
5.5. Fee charging options	43
<b>6. Proposal for the reform of the construction land development fee</b>	<b>45</b>
6.1. Purpose of Infrastructure Fees	47
6.2. Types of Infrastructure Fees	47
6.3. Criteria, Formula	48
6.4. Exemptions and Deductions	51
6.5. Possible Procedure for Setting Infrastructure Fees	52
6.6. Directing Collected Revenue	52
6.7. Necessary Legislative Changes	53

## **1. THE CURRENT SITUATION REGARDING CONSTRUCTION LAND DEVELOPMENT IN SERBIA**

### **1.1. Legislative framework**

The Law on Planning and Construction stipulates that the funding for construction land development is provided from the following sources:

- 1) construction land rent;
- 2) construction land development fee;
- 3) construction land use fee;
- 4) other sources in accordance with the law.

The funds from the construction land development and use fees are used for the development of construction land as well as for the construction and maintenance of utility infrastructure facilities. The construction land development fee is payable by the investor, with the amount of the construction land development fee being determined by the contract concluded between the investor and the municipality or the authorized company, based on the criteria and standards set by the municipality. The contract regulates the mutual relations relating to construction land development, the amount of the construction land development fee, fee payment schedule, as well as the volume, structure and deadlines for the performance of land development works. It is paid by investors before commencing the construction, towards infrastructure costs required for the facility completion. In other words, by paying the construction land development fee the investor usually acquires a right to:

1. land preparation – resolution of property issues, resettlement, planning and technical documentation, land reclamation, etc.

2. introduction of utility and other infrastructure at the land – water supply, sewerage, roads and parking lots, green areas, etc; in Belgrade land servicing does not include electric power supply, PTT network and district heating system, which are contracted separately, whereas in Novi Sad both electric power supply and district heating system are included in land servicing.

The total development fee collected in 2005 was very high (10.5 billion dinars – around EUR 120 million), which presents as much as 10.3% of the total fiscal revenues of the Serbian towns and municipalities. In practically all decisions of local communities it is stated that the fee is charged based of the actual development and servicing costs, immediately proceeding to the fee determination according to totally different criteria. These criteria are the same as those used when determining the construction land usage fee: surface area and purpose of the facility and its location. The quantification of the criteria is usually different for the two fees – the number of location zones differs, the classification of facility purpose differs, there are different criteria for the servicing level – but the principle is the same. Thus, thus appears to be an attempt to place a burden on the value of the facility and accompanying land through the fee.

Essentially, the link between the value of a location and costs of its servicing should not exist in principle. It seems logical that all locations in a town have equally good (or bad) utility and similar infrastructure, as well as that the value of locations varies greatly, depending on their commercial attractiveness – the value of a location has nothing to do with the costs of its servicing with municipal infrastructure. That is why it is obvious that the development fee does not present only a compensation paid by the investor for the previous or future costs of location servicing, but also a method of collecting town rent.

In some towns (in Belgrade, for example) when land is to be rented out, the development fee is a subject of bidding, so the investor that offers the highest amount of the construction land development fee is granted a lease. This system has yielded in some cases excellent results in New Belgrade and other attractive locations, from the standpoint of fee amount maximization. This auction method of fee determination clearly demonstrates that the town authorities believe that their standard system of its determination – through the previously mentioned formulae – is not the best and that its performance is unsatisfactory, even when the locations are good and investment climate favorable. Then it is evidently better to organize an auction and collect large amounts of fees, as well as to select the best investors - those that are the most willing to pay for a certain piece of land. Nevertheless, the basic reason for choosing auction is the collection of land price, i.e. at least the price of land use right transfer, since there is no other method to collect the «price» of the land in the state property system. This shows that the land price is essentially determined at auctions, whereas the land servicing costs are just the starting (reserve) auction price.

There is no doubt that the significant amounts for the development fee (millions and dozens of millions of euros) offered at auctions have nothing to do with the infrastructure quality and costs for the given facility; instead, they present a one-off payment for the land price defined as the capitalized rent. In other words, the high fee presents in fact a payment for the purchase of the right to use an attractive location. At the same time, it does not present the real purchase price, since the government is not selling the ownership right, but only the right of lease for a certain period of time.

This is how the land rent payment is effected in the current system:

1. the first component is a lump sum payment, charged as the development fee; it contains a part that refers to infrastructure costs, but also a part that is a pure price of the land payable as a one-off advance payment which depends exclusively on the attractiveness of the location,
2. the second component is the rent/land usage fee, payable on a monthly basis in moderate amounts.

Such a method of payment (a significant advance payment plus periodic payments) is convenient for the finances of the Serbian towns and local self-governments, since in such a way they obtain immediately, i.e. in advance the money they certainly need sorely in a short period of time. A leaser, i.e. local authorities collect a pure, periodic rent gradually, in small amounts, which is a less favorable solution.

The land development fee is only in part what it nominally presents – infrastructure costs – whereas in other part it is a one-off collection of the capitalized rent, i.e. land price. Moreover, it can be said that this role of the fee is unnecessary and presents a remnant from the previous period, when it was necessary to justify its collection by the government with a

service provided in return, so a fee was invented for the previous or future infrastructure costs, although it is quite clear that the amount of the fee does not depend on them but on some other criteria. Those criteria attempt, on the basis of a formula, to determine the land value, which again has nothing to do with infrastructure costs. This little game did not make much sense even at the time when the development fee was created, and it makes even less sense today, when the circumstances have changed during the transition. Namely, it is now quite possible to collect from the investor not the supposed infrastructure costs, but what it is all really about: full rent in line with the plot value. The government leases a plot to the investor and has a right to charge a rent in a form that is acceptable to both parties, i.e. both as periodic payment or as a lump sum, or a combination of the two.

### **1.2 Existing practice in construction land development in Serbia**

#### **1.2.1. Belgrade**

The decision on the criteria and standards for the determination of rent and construction land development fee provides for the payment of this fee according to the zones and facility purpose. The stated decision divides the area of city zones into five zones from the center to the outskirts of the city. A «de luxe» zone has been introduced for the most attractive locations. The classification into only six zones can be assessed as inadequately precise for a city such as Belgrade. It can also be noted that the zones are completely different when the land use fee is determined, which calls for the maintenance of two separate data bases and unnecessary costs.

Land development covers the costs of construction land preparation and servicing, as follows:

- construction land preparation includes exploratory works, preparation of surveyor and other basic data, preparation of planning and design documentation, resolution of property-legal affairs, resettlement, demolition of facilities for which such a course of action is foreseen in the plan, land reclamation, preparation of the land development program and other works;
- construction land servicing includes the construction of facilities and reticulation of water supply, sewerage, roads with complete equipment, construction of parking lots and pedestrian areas, construction and development of public green areas with ancillary amenities and other works.

It is worth mentioning that the construction land development fee in Belgrade does not cover the infrastructure costs about which the investor concludes separate agreements with the competent companies (electric power distribution facilities and reticulation, TT facilities and network, cable distribution system, district heating system, gas distribution system, etc.).

The amount of the construction land development fee is determined depending on the following:

- public construction land development costs,
- purpose of the facility-premises (or land) planned for construction.

It should be noted that despite the fact that it is explicitly stated in the Decision that the amount of the fee depends on the development costs, from the rest of the Decision text and the practice it can be concluded that this is not so. The fact that the land is allocated through an auction, with the investor offering a certain amount of this fee demonstrates that there is no real link with the costs. In this case the fee is there to simulate the land market, which cannot be characterized as bad.

The construction land development fee is payable per square meter of premises, and not per square meter of land, and varies depending on the purpose, i.e. it ranges from 3,419 dinars/m<sup>2</sup> (for the facilities of «social standard» (e.g. workers' mess) in the 5th zone) to 38,220 dinars/m<sup>2</sup> (for business/commercial facilities in the «de luxe» zone).

As for the purpose of the facility, facilities are classified in 6 groups: facilities of «social standard», residential buildings, business/production facilities, business/service facilities, business/commercial facilities and single-family residential facilities. The amounts seem to be discretionary, not reflecting the actual construction costs, in particular in the three groups of business facilities. For example, in the first zone, the fees for production, service and commercial facilities amount to 16,303, 19,950 and 27,300 dinars/m<sup>2</sup>. It is difficult to comprehend why the servicing of the land on which a commercial facility will be built (e.g. a supermarket) «costs» 67% more per m<sup>2</sup> than when a production plant of the same area is to be constructed. This seems to present a relic of the communist era, when the production activities were valued above the commercial activities, so they had to be «stimulated». It is commendable that in the «de luxe» zone the amount of the fee for single-family houses and residential buildings is the same and amounts to 20,475 dinars. What is surprising is that in all other zones the amount of fee for residential buildings is 60-65% higher than for single-family houses per square meter. It is also worth mentioning that for petrol stations the fee amount is multiplied by 2, with even the area under the awning being taken 100% into account, although it certainly does not entail any costs of land servicing.

It is worth looking at the exemptions and deductions provided for by the Decision. First of all, they refer to the Red Cross of Serbia (a 40% reduction), then to government bodies in the amount of 20%, as well as for the flats of the Solidarity Fund, for the flats built and financed by the Foundation for the Resolution of Housing Needs of Young Scientists and apartments for socially vulnerable persons whose construction is financed from the budget. Interestingly, the public construction land development fee for the construction of religious facilities, according to this decision, is charged at the level of only 10% of the fee, so it can be noted that the city of Belgrade conducts, through the construction land development fee, not only the social and economic, but the religious policy as well.

### 1.2.2 Subotica

The decision on the standards for the determination of the amount of the rent and of the construction land development fee provides that the fee is to be calculated based on the current level of utility infrastructure presence on the construction land, per square meter of the net area of the facility.

For example, if the location is fully serviced (including the electric power supply, pavements, water supply, sewerage, etc.) the basic fee per square meter amounts from 450 dinars/m<sup>2</sup> (for the 7th zone) to 2,300 dinars/m<sup>2</sup> (for the de luxe zone). This basic price is multiplied by a coefficient depending on the purpose of the facility in order to obtain the total fee. The coefficient ranges from 0.5 for public facilities to 2.5 for petrol pumps, betting shops, etc. As in Belgrade, the economic-production activities (coefficient 1.2) are favored over the business-service activities (1.8) and business-commercial activities (2). Unlike Belgrade, where single-family houses are favored over residential buildings, in Subotica the situation is reverse (coefficient 0.8 for residential buildings and 1 for single-family houses). It is interesting that in Subotica, when religious facilities are built, the fee is calculated by multiplying the basic fee with coefficient 1, i.e. there are no special incentives.

As regards incentives, the mayor has a possibility to reduce the amount of fee by not more than 25%, as an «incentive for the construction of particular interest for the development of the municipality». He may do so in the following cases:

- a significant number of workers will work in the facility relative to the area of the facility;
- the investor invests significant funds in the utility infrastructure which is of general interest;
- the investor is obligated to pay the calculated fee within 30 days;
- the facility contributes to the environmental protection.

With this decision, the municipality of Subotica is divided into eight zones (de luxe plus seven) which can be assessed as many, in view of the size of the town and the number of villages. Moreover, it is unclear why the villages in the Subotica municipality are classified in different groups, so the amount of fee in certain villages (e.g. Bačko Dušanovo) is double the fee amount in other villages (e.g. Tavankut). The reason cannot be that the costs of land development are twice as high.

### 1.2.3 Paraćin

The decision on the standards for determining and contracting the amount of the construction land development fee stipulates that the amount of fee depends on the degree of land development and land purpose. The components of the total fee are the following: construction land preparation costs, costs of preparation involving trunk and primary facilities, costs of secondary facility introduction and attractiveness of the location.

For each of the six possible purposes (which are defined in the same way as in other analyzed towns) the fee components related to the costs are clearly defined and seem logical, except that in Paraćin business-commercial and business-service activities are slightly discriminated against in comparison with production activities (1390 dinars/m<sup>2</sup> for production activities, 1650 dinars/m<sup>2</sup> for service and 1920 dinars/m<sup>2</sup> for commercial activities). It is worth noting that in this fee component the location is never taken into account. The zone comes into play in the other fee component, which refers to the attractiveness of the location. There are six

zones in total and the fee ranges from 50 dinars/m<sup>2</sup> for the facilities of «social standard» in the 6th zone to 1900 dinars/m<sup>2</sup> for commercial activities in the 1st zone.

### 1.3 Effects of the existing system

The current regime of construction land ownership and management in Serbia, as well as of financing the construction of utility infrastructure, has few advantages. Only disadvantages are visible, which will be dealt with further in the text.

**Inefficiency of land use.** The existing system of construction land use does not recognize the land market and transactions on such market, so it does not recognize the market price of the land either, market capitalized price or market rent. However, the economic theory, as well as the economic practice of the developed countries, point to the conclusion that without a real market in a certain resource there are no possibilities for its cost-effective (economically efficient) use. For the resource allocation to be cost-effective, there has to be a mechanism transferring a resource from those using it inefficiently to the hands of those that use it most efficiently, and those are the ones ready to pay most for it or for its use. The market is such a mechanism, at which the land is bought and sold based on free agreements and on freely formed prices.

Such a position refers fully to the urban construction land as one of the most valuable resources in modern economies, including Serbia. Namely, the non-existence of the construction land market means that the price of land use is not formed based on the supply and demand or based on the costs and benefits the use of such land offers to its potential user, but on the basis of other criteria.

When such an institutional solution is considered at the level of individual plot (location) it can be seen that in Serbia this location is not used by a potential user who was ready to pay the highest price for its use (capitalized price or periodic rent). This means that this lot is not used by economically the most efficient user, but by someone else, so this lot is used in an economically inefficient manner. Inefficient land allocation among users arises due to two facts: first, the user is selected administratively, i.e. by a decision of local authorities; second, it is not the market price proportionate to the location benefits (i.e. its potential profitability) that is paid for its use, but something else (land servicing costs or administratively set rent based on social and other, essentially political criteria). Such a system of price formation usually covers costs regardless of their level (and regardless of whether they are borne by the investor or end user) or even lower levels, not economically efficient land use.

Despite that, the right of urban construction land use cannot be transferred to a third (natural or legal) person, which causes great lack of flexibility in the urban land use. Namely, the selected user is thereby forced to use that lot for an indefinite period of time (or for several decades), regardless of the changes occurring in his business environment or in his operations. This prevents him from moving from one location to another, thereby reducing the spatial mobility of the user, causing a lack of flexibility in the construction land use.

Apart from the non-existence of the land market, a factor of use inefficiency are also the sociopolitical criteria in the allocation of use rights and in the usage fee determination and



collection. Namely, as any government activity, the disposal of state land in a democratic society in transition is inevitably politicized, i.e. the decision-making on disposal begins to have, apart from economic and financial motives, political motives as well: who is the winner and who is the loser regarding a decision, what kind of an effect a decision will have on the authorities' political rating, what are the interests of the coalition partners, how will the voters react to the decision and the like.

Under such circumstances the social factor is frequently stressed more than it is necessary. For example, the government is overly understanding for an inefficient company which continues to hold a land and still exists for social reasons, i.e. to delay the laying-off of workers. Or, in determining the construction land usage fee the basis is often the estimated ability to pay, while the purpose is often defined (citizens, industry, crafts, financial services, etc.) based on the estimate of the degree of ease the users from various purposes will be able to bear costs and pay the fee.

Naturally, these social factors have a negative impact on the allocation efficiency, because the land continues to be held by those who need socially motivated discounts by the local authorities and who are unable either to use the land efficiently or to bear normal costs of its use.

A particularly negative contribution to the inefficiency of land use was provided by the following two characteristics of the construction land use fee and construction land development fee:

1. *Charging of the fee according to the area on which facilities have been or will be constructed*; this stimulates utterly inefficient land use, because it does not penalize (financially) the one using the land inactively; thus, the same fee amount is paid by the users of two facilities of the same area, although one of them is using a small and the other one a large plot of land in the town center; this kind of system contributes to the degradation of the most valuable land, for example in the center of the large cities, because there is no incentive for the current owner or a mechanism that will force him to increase the degree of construction on the valuable land or to move out if he is not unable to do so; in other words, from the aspect of fee amount, for an investor or land user it makes no difference whether the construction level index on the given plot is 1 or 20, as only the size of the constructed facility will matter; in this way inefficient land use is directly stimulated, in particular in the city center; this means that at the locations in the city center there are economically inefficient land users, reducing the overall economic efficiency of the city economy; for this reason in the town centers (in Belgrade as well) it is possible to see hovels tying up the most valuable land, but their users still pay low usage fees, because they are payable on the facility area and not on the land value.

2. *The difference in the fee amount according to the facility purpose*; in the Serbian towns the local authorities' partiality towards the industry and similar «production» activities has resulted in them paying relatively low rents, land use and land development fees; this difference stimulates the inactive land use even at valuable locations, for which it would be better if they were used intensively, which is not good for cost-effective and economically efficient land use; in market economies the rent amount (which is to a certain extent comparable to the usage fee) depends exclusively on the plot location, since the manner of use of that location is the user's private affair, unless violating the restrictions provided for by

the relevant urban plan; for that reason, in market economies the land on central locations is used exclusively by intensive land users, since others are unable to bear such high costs.

In these ways the existing system of use and fiscal burden on the urban land not only fails to penalize the inefficient land use, but it even stimulates it with its instruments.

**Less investment/construction.** The existing model of construction land does not present a good basis for the investors' decision-making whether to invest in Serbia or not, including facility construction. Namely, this decision does not depend only on the commercial aspect of the relevant activity, but also on the possibility of stable and certain use of land on which the facility will be built. If the land use is dubious and uncertain, then the interest of potential investors is certainly smaller.

There are several sources of uncertainty in the existing construction land use model. First, it is the uncertainty regarding the duration of land use. Namely, even when the land is given for an indefinite period of time and when it is obtained for a certain period of time, there is no firm guarantee that this will be observed by the government and that the user will be able to enjoy the land use in the planned manner. The government can, and it has previously done so, amend the terms of land use through the amendments of laws or local decisions, with serious impact on all the elements of the land use contract. For example, it is possible to change, through legislation amendments, the existing use for an indefinite period of time to a definite period of time, such as 99 years or less. There can also be an amendment to the regulation plan and purpose of certain plots, leading to a termination of the use right for an indefinite period or even a definite period of time. Simply put, the level of certainty with the government as the lessor is not the same as with a private lessor, because the government can change the terms of use by one-sided acts, as it sees fit.

Second, there is uncertainty about possible construction land privatization and, in particular, the method of privatization of construction plot that investor is using or wishes to use. The privatization of construction land is a possible or likely option in all transition or post-transition countries, so potential investors have problems in assessing the probability and direction of such change. It is understandable why the possibility of privatization bothers them: it is quite conceivable that it could significantly worsen their position or cause them to incur increased costs. This is due to the following: 1) since the privatization method is certainly unknown until the parliament adopted the relevant legislation, the current lessor or user of the state land cannot know what solutions will be adopted and whether it will even remain as a lessor after the privatization as well; 2) if he does remain, he could be forced to pay a large amount for the purchase of the land, which could, together with the previously paid charges (for example, the land development fee) could be very high, even above what the land is worth and what the investor would be willing to pay.

Third, there is also uncertainty for the land users regarding the manner of rent adjustment, i.e. the construction land use fee. This is not a private-law, contractual method concluded between a private owner and lessee, when the method of indexation or rent change is known and agreed upon in advance; instead, it is a contract with the government which it can, through legislative changes if nothing else, amend and, instead of one, introduce another correction mechanism. Long-term effects of the mechanism of rent change can be very large.

Fourth (related to the previous), for the investor it is difficult, i.e. practically impossible, to assess the value of the given plot. Apart from the stated uncertainties, the reasons include the

non-existence of the legal construction land market and non-existence of full ownership over construction land. The legal market of urban construction land does not exist because it is state-owned and its use is granted to users, i.e. users cannot sell it without the facility. The land sale is possible only together with the facility on it, but then it is not possible to separate the price paid for the facility from the price paid for the land. State ownership over construction land means that the urban land user owns only a partial set of ownership rights, i.e. it has a right to use the land in accordance with the law. Despite the fact that certain construction land is state-owned, it still has, or may have, a certain economic value for the user, because it enables or may enable the conducting of economic activity in accordance with the prescribed purpose. The uncertainty about the land value certainly acts as a deterrent for potential investors, because it is difficult to decide to invest when the investor is unclear how much what he will get through the investment is worth.

All these uncertainties certainly reduce the willingness of potential investors to invest in Serbia. This applies to real estate investors, i.e. those who wish to engage in the construction and sale of commercial and residential facilities, as well as those who wish to invest in companies. The fact that this is not just a purely theoretical consideration is confirmed by the information about how certain foreign investors perceive the land regime in Serbia and its consequences: dissatisfaction with state ownership and the method of its use is widespread, in particular uncertainty regarding the future.

**Reduced land income of local communities.** According to the existing construction land regime local communities collect less revenues from the land than they could if it were privatized. In such a way fiscal revenues sorely needed by local communities to meet the needs of citizens and economy in their territory are lost.

The first loss is the lost opportunity to generate new revenues for the town budget from privatization and sale of land. Land is a valuable resource and significant revenues can definitively be collected from its privatization. Even if, together with privatization, the process of restitution is initiated, so one part of the land is returned to its former owners, and compensation is paid for another part, significant funds will certainly remain both from the proceeds from the land that was owned by the state even before nationalization (there was such land in larger towns), as well as from the probable difference between the sales price and compensation.

Second, even regarding the current revenue from the land there is a loss in the present system relative to the private ownership regime. It is not clearly visible, but it does exist and is reflected in less revenue collected from the land usage fee in comparison with the property tax which would, as a standard tax, be collected on the private land.

Three loss components are worth mentioning:

1. The government in Serbia is conducting, through the land use and land development fees, the social policy as well, by land classification according to the purpose, losing revenue in the process; such a broad social policy would not be feasible with the property tax, which would be collected on the total value, including the land, so the fiscal revenues would be higher.

2. When, regarding the land use and land development fee, broad zoning is performed, then the average fee in a zone must be lower than when assessing and collecting a charge based on the value of an individual location; namely, when it is necessary to have an

average charge for fairly diverse locations, the common charge is inevitably determined according to the least attractive locations and not the best locations; otherwise, those least valuable locations would have an excessively high price, unbearable for the owner/user (e.g. the charge for a location in the main and side street in a town cannot be the same); this determination of the average at a lower level certainly causes a loss of potential revenues, benefiting the users at the most attractive locations; the latest method of setting the rents through auction, applied in some towns in Serbia, corrects this weakness, but is unable to determine fees at all locations rented out, let alone determine the usage fee on locations rented out a long time ago.

3. Less efficient land use also leads to fiscal losses because the base increases more slowly than in the event of efficient use; namely, fiscal revenues from real estate, including land, in the cities around the world depends to a great extent on the value of real estate, as the tax base; in more advanced cities this value is higher than in the poor cities with lower-quality management, so their revenues from the property tax are higher; that will happen in the Serbian towns as well: as the land is used better and economic growth accelerates, the value of real estate will grow faster, providing higher revenues from the local real estate charges.

4. There is certainly a loss regarding the land development fee, since a lower amount is collected there than would have been collected if the land were sold on an auction; namely, since renting out the land for a certain period of time, even if it is 99 years, presents a transfer of only part of property rights over the land to the new user, it is certain that investors will be willing to pay significantly less than if they were buying the land that is to become their property.

## **2. NEED TO REFORM THE CONSTRUCTION LAND DEVELOPMENT FEE**

The construction land development fee, together with the construction land use fee, was introduced in Serbia in the second half of the 1970s. That was the time of the self-management-based socialist economy; hence, an economy that was a far cry from the standard market economy with all its supporting institutions, such as freely set market prices, property taxes, etc. The introduction of the two mentioned fees at that point constituted an attempt to introduce certain elements of market institutions into a non-market environment, such as the socialist economy.

The demise of the socialist economy and the introduction of the institutions of a standard market economy in Serbia have eliminated the basis for the preservation of the two mentioned fees in their present form, i.e., they have created a need to reform the construction land development fee. That need has arisen from several elements of reform: the reform of local public finances, the privatization of construction land and the privatization of public utility companies.

### **2.1. Reform of Local Public Finances**

The reform of local public finances, which was implemented in July 2006 with the adoption of the Law on Local Government Finances, has brought about an increase in non-shared revenues of local self-government units, in that this Law has turned the periodical property tax into the non-shared revenue of local self-governments, meaning that bodies of local self-governments can now autonomously, within the range prescribed by the law, set the property tax rate. Furthermore, the Law defines another 15 non-shared revenues, namely various types of fees, fines, proceeds from sale, from lease, etc. Such reform, that is, the reclassification of the periodical property tax into non-shared revenue, has resulted in a strong growth in non-shared revenues of local self-governments. Likewise, amendments to the Law on the Tax Procedure and Administration have assigned to local self-government units considerable powers, i.e., important functions associated with the administration of that tax, primarily with respect to the registration of taxpayers and their assets, the valuation of the tax base, as well as the assessment and collection of that tax.

These amendments to the law have eliminated, i.e., significantly weakened the motivation of local self-government units to make no changes in the fees related to construction land. That is to say, those fees were perceived in the past as the main, that is, the most important non-shared revenue of local self-governments in the circumstances in which the property tax did not accrue to local self-governments as non-shared, but rather as shared public revenue. That is why all those fees were zealously guarded, since they accounted for the bulk of the non-shared revenue of local self-governments, thus enabling the bodies of local self-governments to have a bit more sound financial planning, and mitigating the uncertainty inherent in the character of shared revenues. Although, strictly speaking, the revenue from the construction land development fee is not public revenue, financial management of the revenue raised from that source has enabled a more flexible financial management and short-term bridging of all kinds of gaps in local finances. All the mentioned motives, irrespective of how legitimate

they were, are now considerably weakened by the new legal arrangements, which have turned such a powerful tax as the property tax into non-shared revenue of local self-governments.

The mentioned changes have created conditions for a comprehensive review of the rationale for the existence, i.e., preservation of the fees related to construction land. It has already been proposed, within the framework of the reform of local public finances, to incorporate the construction land use fee into the property tax, and now all the conditions are in place to proceed with the re-examination of the survival of the construction land development fee and with a proposal for a possible reform of that fee.

## **2.2. Privatization of Urban Construction land**

The adoption of Serbia's new Constitution in the autumn of 2006 has removed a constitutional obstacle to the privatization of urban construction land, which was the main reason why this specific privatization was not undertaken for such a long time. Consequently, it is possible to expect a political decision to be taken soon to embark upon the privatization of this resource, which implies the passage of a relevant law that should define all essential elements of the privatization of urban construction land: a model, methods, scope and pace of the privatization, as well as the distribution of competences between the central and local authorities.

Several proposals have been put forward in professional circles, which more or less consistently deal with the mentioned issues, i.e., define the general model of the privatization of urban construction land. Irrespective of which privatization model will be accepted, i.e., of how the key questions of that privatization will be addressed, it is certain that the privatization of urban construction land will bring along several major changes in the manner in which this resource is allocated.

First, it is clear that the existing administrative procedure of ceding/assigning land to an investor for use, i.e., lease, by the local authorities, will be abandoned. Consequently, the local authorities no longer appear on the urban construction land supply side; instead, those appearing on that side are its private owners.

Second, the non-transparent and non-market-based method for selecting investors, that is, users of urban construction land, according to which local self-government units, as the only *de facto* owners of urban construction land, enter into contractual relationships with selected private investors, i.e., users, will disappear.

Third, land owners will receive from buyers the amount of the contractual selling price and all property rights will be then assigned to buyers, including the right to dispose of land, not just the right to use it, as has been the case so far. The buyer and the seller will find each other on the market for urban construction land.

The practice so far has been to set and collect the construction land development fee on the basis of a contract pursuant to which the local authorities grant land to investors for use, but this type of land allocation will completely disappear through privatization. Specifically, land will be allocated to the investor in the following manner: he will acquire ownership, i.e., full property rights, namely through public sale (in privatization) or through a sales contract

between him and the private owner of urban construction land. In such a manner, the basic existing mechanism for the collection of this fee will be eliminated.

It is obvious that all the changes, in which the privatization of urban construction land will inevitably result, unavoidably give rise to the need to review this fee. Admittedly, the possibility remains to collect this fee solely for rendering services associated with the provision of infrastructure for urban construction land. It is all the more so because it is clear that charges will be collected when buildings are constructed for connections to utility technical systems, and the character of these payments should be reoriented toward covering actual costs generated by the investor, i.e., new land users. The future of the construction land development fee should be considered in that context.

### **2.3. Potential Privatization of Public Utility Companies**

Utility activities are performed in Serbia on the basis of the Law on Utility Activities, which provides for the possibility to entrust the performance of individual utility activities to private companies, as well as for the privatization of the existing equity in public utility companies. Likewise, the current Law on Concessions enables the implementation of individual projects in the field of utility activities.

The reasons for the privatization of public utility companies in Serbia are multiple. They boil down to the improvement in economic efficiency of the use of existing resources, the creation of conditions for the financing of new investments with private funds (capital), as well as for the transfer of technology and know-how. The privatization of utility companies also implies a drastic change in their behavior relative to their present conduct.

The change will be reflected in the necessity to cover full operating expenses, including the cost of capital expressed as a normal profit rate on invested capital. In other words, private utility companies, that is, private projects within technical utility systems, will render utility services only if their total costs are covered.

The existing system of the construction land development fee implies that the bodies of local self-governments, or organizations that they have founded, use thus collected resources for investments in the facilities of the technical utility systems, irrespective of whether these are individual or collective utility consumption facilities, i.e., private or public goods. The thus constructed facilities are then handed over, that is, transferred to the competent public utility companies, and are included in the balance sheets of those companies. However, public utility companies are not investors; instead, the function of the investor is carried out by the competent organizations such as construction directorates or institutes.

Such a system is simply unsustainable in the case of private utility companies, i.e., private-public partnerships. Specifically, private utility companies act as any other company, that is, they invest on their own, regardless of how they have raised capital for investment. Their decision to invest is based on the business policy and for such companies it is unacceptable that others take investment decisions, invest and then transfer the thus acquired property (fixed assets) to a private company. That would be unacceptable for local self-governments, since such transfer would probably require an equity stake in private companies, i.e., appropriate participation in management. In other words, the existing system of collecting the

construction land development fee is completely incompatible with the privatization of public utility companies, i.e., private-public partnerships in these activities.

All the above points to the fact that it is necessary to comprehensively re-examine the possibility to keep the construction land development fee, i.e., the possibility for its radical reform in case it is kept.



### 3. CURRENT SITUATION IN THE WORLD AND THE REGION

#### 3.1. United States

In principle, in the USA any imaginable way of local infrastructure development funding is pursued: taxes (payable by all the inhabitants), price (payable by all service users), infrastructure development fees (impact fee, payable by investors for newly-constructed facilities) or grants from the state and federal authorities. The selected model varies greatly depending on the federal state and local self-government.

As regards taxes, the local taxes (types and rates) vary greatly from one state to another, but local services are mostly financed from the property tax and partly from other taxes (personal income tax or sales tax). The fees include both the fees for the use of a certain service (user charge), or an asset, such as the water consumption fee, as well as one-off fees payable for the connection to the supply network. Among other fees (permit fees, development fees, dedications, in lieu fees, exactions), since the end of 1980s the local self-government units have been calculating and collecting the so-called impact fee.

The impact fee has been gaining popularity in the past 20-odd years. The main reason seems to be the fact that in the late 1980s and early 1990s many local self-government units faced large problems with utility infrastructure development funding, so they had to resort to innovative methods of raising money. The Americans' perception that their taxes were too high had a similar effect, as the introduction of the new taxes or increase in the existing taxes was politically unacceptable.

As stated previously, in the US there is a lot of diversity regarding utility infrastructure financing and the federal government did not interfere directly in this issue, leaving it to the federal states. However, the tax treatment of the impact fee, as well as individual judgments of the US Superior Court have certain consequences on the calculation and collection. For example, in the case *Dolan vs. City of Tigard* (1994) the Supreme Court concluded that the order of the city urban planners to define the purpose of part of a private plot (property) as a bicycle path, as well as the order to introduce greenery in part of the plot, presents «uncompensated expropriation of private property», and as such, a violation of the 5th amendment of the US Constitution. The US tax system considers the paid impact fee as «capitalized costs related to the building» included in the depreciation calculation.

Apart from these details, the federal authorities have not dealt with this issue, but have left it completely to the states. Depending on the concrete answers to the questions of competence and fiscal system, the federal states introduced specific fees.

As mentioned previously, nowadays approximately thirty federal states allow local self-government units (towns, districts, school districts, boroughs), to levy a fee analogue to the impact fee. It is accepted that a system that meets the following requirements can withstand the test in court (since almost all decisions of the local self-government units were subjected to a judicial review by associations of entrepreneurs or by a concrete entrepreneur):

1. A local self-government unit must assess the needs for capacity increase before adopting a decision to introduce an impact fee, as well as to determine which precise capacity is needed.

2) The local self-government must place such assessment at the disposal of the public for review.

3) The study must take into account the already existing surplus capacity, i.e. an impact fee cannot be charged if the existing capacity has not been used up.

4) The local self-government must adopt a clear plan or financing and construction of new capacity, which clearly provides when and how it plans to spend funds on capacity expansion.

5) The funding plan must contain the assessments of all costs of new capacity construction that are as precise as possible.

6) Those costs must be allocated fairly. In other words, the local self-government unit must allocate the capacity construction costs in accordance with the probable demand that will be generated by the construction of the new facilities.

7) The amount of fee must be proportionate to the cost arising from the construction. This means that the system must take into account various effects of different housing units and different business facilities on the required capacity. In connection with this, the decisions introducing the impact fee only for a limited purpose of construction (e.g. for business facilities) are most often repealed in court.

8) The funds collected from the impact fee must be spent for the purpose which will benefit exclusively the newly-constructed facilities.

The purposes for which the impact fee can be introduced vary to a great degree from one state to another. Several states (California, Florida, Hawaii, Rhode Island and Vermont) allow the use of the impact fee for practically all possible purposes: streets and roads, water supply, sewerage, storm water sewerage, parks, fire service, police, libraries, schools, garbage disposal, while on the other hand there are states that do not allow the collection of the impact fee for some of these services. The most restrictive system exists in Illinois, Pennsylvania and Virginia, where the law allows the impact fee introduction only for streets and local roads.

Certain states have introduced restrictions with regard to the authority to introduce the impact fee. For example, in Texas and Wisconsin only towns can introduce the impact fee, while in Arizona it is defined in detail for which purposes the impact fee can be introduced by counties, and for which only by towns. Since in the US there is no uniform system of local self-government organization, such solutions should not come as a surprise.

The requirements related to the documentation necessary for the impact fee collection are also worth reviewing. Almost all the states request, before a decision is made, that an analysis be prepared, as well as a list of projects that will be financed from the collected fee and a cost estimate for those projects. Most states have also introduced a requirement for the local self-government units to determine precise geographical borders within which the fee will be

collected, based on the estimated benefit the newly built facilities will have from the infrastructure.

With regard to the procedure, it also varies significantly from one state to another. However, certain basic elements can be identified. First, numerous states have introduced an obligation of adopting a decision on impact fee after public consultations. Also, many states (20 of 27) have introduced an obligation that the proceeds collected from the impact fee must be spent on the previously defined items in a certain period of time. If the funds are not spent, the money is returned to the investor.

For example, in Santa Fe, New Mexico, the construction of new houses leads to the payment of the following amounts of impact fees.

	<1500 sq. ft.	1500- 2000 sq. ft.	2000- 2500 sq. ft.	2500- 3500 sq. ft.	>3500 sq. ft.
Total	4,385	5,641	6,658	7,925	9,186
Roads and streets	1,135	1,527	1,820	2,247	2,560
Water supply and sewerage	2,336	2,781	3,177	3,504	4,048
Parks	767	1,128	1,397	1,793	2,080
Fire service	118	165	212	306	400
Police	29	40	52	75	98

An example of the calculation of impact fee in Greenville, Texas, might be worth mentioning. In Texas the impact fee can be collected for streets, water supply and sewerage. As regards the water supply, in Greenville the impact fee amounts to \$408 per «unit», defined as a «<sup>3</sup>/<sub>4</sub> inch water meter equivalency», corresponding to the maximum flow of 15 gallons a minute. The fee amount for sewerage is \$336 per «unit», defined in the same way, and for roads and streets it is \$153 per unit. For roads and streets a «unit» is defined as one vehicle-mile trip per day generated by the new facility.

The number of units is determined on the basis of an adopted equivalency table. Thus, if a new facility requires a 2-inch water supply connection, this enables a maximum flow of 80 gallons a minute, which is equivalent to the amount of 5.33 units (80/15). The amount of \$408 is multiplied by that number, so the water supply impact fee amounts to \$2,175. The same method (and the same table) is used to arrive at the amount of \$1,792 for sewerage.

As regards roads and streets, the facility purpose is used for the calculation of the number of units. For example, if the facility is to be a plant with 50,000 sq. ft, the table shows that it is assumed that each thousand sq. ft. of area generates 0.61 trip a day, of the average length of 3.12 miles. By multiplying these three numbers (50, 0.61 and 3.12) we arrive at 95 «units». By multiplying 95 with the fee per unit (\$153) we arrive at the impact fee for roads and streets of \$14,535. If, instead of a plant, it is a fast food restaurant with 10,000 sq. ft, it is estimated that each 1,000 feet of area generates 11,7 trips of 1.15 miles on average, which gives 128.4 units (10 times 11.7 times 1.15), or 19,645.2 dollars.

For some other purposes of the facilities (for example schools or hospitals) instead of the facility area, the number of students or hospital beds is used in the calculation of the «unit». The equivalency table used in Greenville is presented in Annex 1.

### **3.2. Bulgaria**

In accordance with the Law on Local Taxes and Fees, the Bulgarian self-government units are allowed to collect the following taxes and fees: the real estate tax, gift tax, motor vehicle tax, concession income, garbage disposal fee, fees for technical and administrative services, fees for agricultural property protection, as well as the fee for the use of nurseries, day care centers, social care institutions, etc. As seen from the above, there is no special fee or tax which serves exclusively for the development of utility activities and land servicing, and the development of local infrastructure is almost exclusively financed from user charges.

The situation in that respect is quite specific in Bulgaria. Namely, until the adoption of the stated Law (2003), utility infrastructure was, to a significant degree, financed from the grants received by the local self-governments from the national budget. For example, in 2001 and 2002 more than 55% of the funds spent on the construction of local infrastructure arrived from the national budget, and around 45% from the local budget or user charges.

Bulgaria also had a rather odd restriction, prohibiting the local self-government units from investing more than 10% (1999), 5% (2000) and 25% (2002) of the local budget in infrastructure projects.

After the reforms implemented following the adoption of the stated Law, the situation is somewhat better, but the local self-governments still do not have the right to collect fees related to construction land development, with the development being financed from user charges, local budgets (payable by all local taxpayers) and from the grants from the national budget, i.e. from all Bulgarian taxpayers. The situation is somewhat complicated by the fact that Bulgaria also has a right to funding from the EU funds, but the fact remains that the system is quite inadequate and does not guarantee in any way quality and efficient development of the Bulgarian towns and municipalities.

### **3.3 Croatia**

The Law on Municipal Economy provides for the following financing of utility infrastructure.

The construction of facilities and installations of utility infrastructure for public areas, unclassified roads, cemeteries and crematoria, public lighting, is financed from the communal contribution, local self-government budget, concession fee and other sources determined by a separate law.

The construction of facilities and installations of utility infrastructure and purchase of the equipment for potable water supply, waste water sewerage and treatment, gas supply, heat energy supply, is financed from the user charges, connection fee, local self-government budget, concession fees and other sources determined by a separate law.

The construction of utility infrastructure facilities and purchase of passenger transport equipment, sanitation, municipal waste disposal, green markets, are financed from the user

charges, local self-government budget, concession fee and other sources determined by a separate law.

The communal contribution is calculated based on the volume, i.e. per m<sup>3</sup> (cubic meter) of the facility built on the plot, and in the event of a structure being demolished for the purpose of building a new one or in the event of an existing structure being extended, the municipal tax is calculated on the basis of the difference in volume relative to the previous structure.

The unit value of the communal contribution for the calculation per m<sup>3</sup> of the structure being built is determined for various zones in the town or municipality. This value is the highest for the first zone and cannot exceed 10% of the average construction costs for a m<sup>3</sup> of standard structure in the Republic of Croatia, with this data being released by the minister in charge of municipal economy.

With regard to connection to the network, the local self-government assembly adopts a decision on connection to utility infrastructure for potable water supply, sewerage and storm water sewerage, gas supply, heat energy supply.

The facility owner is obligated to connect his structure to utility infrastructure for potable water supply and sewerage. The owner of the construction plot or the structure pays the actual costs and consumed material related to the utility connection directly to the contractor based on the contract and invoices for the work performed. However, the amount of connection fee per connection for residential purposes cannot exceed the average monthly gross wage in the Republic of Croatia for the previous year.

For example, in the City of Zagreb, the communal contribution ranges between 20 and 180 kunas per cubic meter. The Decision on Communal Contribution also prescribes that a municipal tax payer - natural person building a residential facility for his own needs, with a volume up to 300 m<sup>3</sup> (Article 13 of the Decision), at his request, can be exempt from the payment of the municipal tax, depending on the amount of the average income per member of the payer's family household for the previous year and the amount of the average monthly paid net wage per employee in the legal entities of the Republic of Croatia in the same period, with the reduction amounting from 50 to 100%.

## Annex

LAND USE VEHICLE MILE EQUIVALENCY TABLE

Category	Land Use	Dev. Units (X)	Trip Rate	Trip Length (Mfi)	Total Service Units (Veh-Mi/Dev. Unit)	
Residential	Single-Family Detached	D.U.	1.01	3.12	3.15	
	Multi-Family/Single-Family Attached	D.U.	0.60	3.12	1.87	
	Independent Sr. Living Facility	D.U.	0.23	3.12	0.72	
	Others Not Specified*	D.U.	1.01	3.12	3.15	
Office	General Office	1000 GFA	1.49	3.12	4.65	
	Medical Office/Clinic	1000 GFA	3.35	3.13	10.49	
	U.S. Post Office	1000 GFA	3.23	1.50	4.84	
	Others Not Specified*	1000 GFA	1.49	3.12	4.65	
Commercial/Retail	General Retail/Shopping Center	1000 GFA	2.25	1.37	3.08	
	Restaurant, Fast Food with Drive-Through	1000 GFA	11.17	1.15	12.84	
	Restaurant, General or Limited	1000 GFA	4.34	1.22	5.30	
	Tire Store	1000 GFA	2.23	1.37	3.05	
	Retail Sales with Gas Pumps	1000 GFA	7.27	0.30	2.18	
	Grocery/Supermarket	1000 GFA	4.50	0.93	4.18	
	Hardware/Paint Store	1000 GFA	1.94	1.29	2.51	
	Landscape Nursery (Garden Center)	1000 GFA	1.67	0.85	1.42	
	Auto/Motorcycle Sales/Leasing-New/Used	1000 GFA	1.68	1.45	2.44	
	Video Rental Store	1000 GFA	3.67	0.93	3.41	
	Financial Institution with Drive-Through	1000 GFA	14.79	0.85	12.57	
	Drug Store/Pharmacy with Drive-Through	1000 GFA	3.95	0.34	1.34	
	Bank	1000 GFA	14.79	0.85	12.57	
	Apparel Store	1000 GFA	1.72	1.10	1.90	
	Greenhouse, Commercial	1000 GFA	1.28	0.85	1.09	
	Home Improvement Center	1000 GFA	1.26	1.37	1.73	
	Furniture and Appliance Sales	1000 GFA	0.16	1.32	0.22	
	Discount Club	1000 GFA	1.81	1.29	2.33	
	Hotel/Motel, Full Service	Rooms	0.61	1.35	0.82	
	Hotel/Motel, Limited Service	Rooms	0.47	1.35	0.63	
	Hotel, All Suites	Rooms	0.40	1.35	0.54	
	Automobile Repair, Major and Minor	1000 GFA	1.49	0.93	1.38	
	Movie Theater/Theater	Screens	3.80	1.07	4.07	
	Self-Storage Units	1000 GFA	0.26	2.87	0.75	
	Others Not Specified*	1000 GFA	2.25	1.37	3.08	
	Industrial	General Light Industrial	1000 GFA	0.72	3.12	2.25
		Manufacturing	1000 GFA	0.61	3.12	1.90
		Warehousing	1000 GFA	0.51	2.87	1.46
		Others Not Specified*	1000 GFA	0.72	3.12	2.25
	Institutional	Elementary School	Students	0.015	1.34	0.02
		Middle School	Students	0.16	1.34	0.21
		High School	Students	0.15	1.34	0.20
Preschool or Child Care Center		Students	0.21	0.53	0.11	
Hospital		Beds	1.05	1.68	1.76	
Nursing Home/Convalescent Center		Beds	0.17	1.68	0.29	
Assisted Living Facility		D.U.	0.17	1.68	0.29	
Place of Worship		1000 GFA	0.47	0.78	0.37	
Others Not Specified*	1000 GFA	0.47	0.78	0.37		
* This represents total service unit equivalency for land uses not specified in this category. Actual equivalency may vary and may be demonstrated by property owner to be different pursuant to city guidelines.			DU = Dwelling Unit GFA = Gross Floor Area			

## 4. THE PRINCIPLES OF THE FUTURE SYSTEM

This section will provide an outline of the principles on which a future system should be based intended for financing capital infrastructure building at the local level in Serbia. On the one hand, those principles should indicate which features of the reform system are considered desirable, while on the other they should constitute criteria on the basis of which a decision is to be taken as to the choice of the financing method. The basic principles and/or criteria include economic efficiency, transparency, fairness, contribution to economic growth and administrative simplicity.

Alternatively, there are various sources for financing investments into local utility and infrastructure activities, such as taxes, borrowing, the construction (construction land development) fee, the price of the utility/infrastructure service, etc. Each of those sources, or mechanisms, for construction financing has its own advantages and disadvantages from the standpoint of the mentioned criteria, which will be discussed in the text below.

### 4.1. Efficiency

Efficiency in the field of use and construction of urban land can be manifested in several ways, which differ greatly among themselves. For example, instruments of construction financing certainly affect a city's population density or traffic arrangements and the like, in this manner making their contribution to defining the profile of a city, and to its construction. Thus, for instance, differing arrangements related to construction land development fee by economic sector of use (industry, crafts, etc), in their present form in Serbia, can result in unnecessary favoring of certain activities and in disincentivization of others, in different investment needs, in the breach of the fairness principle and in disincentives to investment and economic growth.

Still, this report will look at economic efficiency, i.e., the issue of efficient resource allocation. It will be defined as such utilization of land where the returns from different land uses are even-profiled, after advantages of the location and town planning arrangements have been taken into account. In other words, it means a reasonable distribution of land across various uses (for housing and business premises, various activities, etc.), with each lot being used by the one who will make the best, i.e., the most efficient use of it, and that is usually the one who is willing to pay the highest price for it. It is understood, of course, that the regulation of land utilization and subsidies of different kinds undermine the efficiency of land utilization.

Urban land should be used efficiently, because inefficient use entails, as the first consequence, an unnecessary expansion of the city and degradation of the environment, and as the second one unnecessary infrastructure costs. Urban productivity predominantly depends on the spatial concentration, which enables fast turnover of labor, goods, services and information in a particular area. The ability of workers and consumers to quickly get from one part of the city to another constitutes one of the main development factors of cities, if not the main one.

One of the fundamental prerequisites for an efficient resource allocation is the non-existence of the so-called external effects, that is, a prerequisite that every economic actor bears all the costs incurred on account of his activity. However, in the construction of residential or business facilities, costs are always incurred, which are not related solely to those facilities as such; there also are costs that are not directly borne by the investor but rather by the local community. These are the costs of providing utility infrastructure, namely not the one on the facility itself, but the one at the level of the local community (e.g. additional traffic load on all routes in the city), environmental pollution, a higher pressure on schools and health institutions in the area and the like. If the investor has not covered these costs as well, the local community will have to cover them through local taxes or borrowing, with negative effects on the existing users and/or the quality of services. At the same time, such an arrangement will constitute a subsidy from old users to new ones, which will provide incentives for building even beyond the desired level.

The instrument, which is used in many countries as a corrective factor, i.e., as a factor which is supposed to internalize those costs by shifting them to the investor, and which is called the construction land development fee in Serbia, is known in literature under its English name the *Impact Fee*. It is, consequently, an attempt by the local community to charge the investor (and the future owner of the real estate) for all those costs that it will bear itself in order to provide to those future owners the necessary utility, infrastructure services, i.e., in order to prevent the deterioration of the quality of services.

As opposed to this fee, there are those methods of financing additional infrastructure according to which the entire local community takes part in its financing: local taxes, borrowing or a rise in the price (user charge) of a particular service. In other words, in all three mechanisms additional costs are not borne exclusively by entrepreneurs and owners of new facilities, but by everybody and all – both old and new users of services.

From the standpoint of Pigouvian theory of economically efficient allocation there is no doubt that the impact fee is an instrument that increases economic efficiency, because it leads to the internalization of external effects, thus boosting building to the level of cost efficiency and actual cost-effectiveness. This is the reason why it is used in many countries, like the U.S. and Serbia, as an instrument for financing infrastructure and utility services. On the other hand, other mentioned financing methods are based on the spillover of effects, i.e., costs of building, from new users to old ones, which encourages non-efficient resource allocation.

Although a more efficient instrument in theory, the impact fee faces difficulties in practical life, which call into question its efficiency. Let us mention two factors. The first one is the difficulty related to the technical operationalization of the fee. Specifically, the whole idea is based on making the fee equal to the marginal costs caused by new building, which should result in the mentioned internalization of external effects. However, an attempt to calculate marginal costs is faced with major difficulties, such as the non-availability of data and the like.

The second factor, which often has a significant impact on the end-result, is a political process for determining the fee, which frequently deforms even the best of ideas. More specifically, the existing service users and politicians are motivated to sharply raise the development fee, namely considerably in excess of the actual costs. In such a manner, the present users are trying to shift part of their costs (of improvement) of infrastructure to new



owners, as well as to contribute to a rise in the price of new facilities by increasing the level of fees, which will inevitably result in a rise of the value of substitutes – the already existing facilities owned by them. Politicians and local officials also have an interest in higher fees, since they bring more money to the budget, and also please their electorate – the existing owners (dwellers). In light of the above, it is very questionable whether impact fees can be set so as to internalize external effects, as prescribed by economic theory. This is how the long-term interest of building and improving the quality of services is lost in a more distant future.

#### **4.2. Transparency**

In the context of infrastructure financing, transparency will be understood to mean the ability of all, and primarily of the population of a city, to find out about the costs imposed by someone on utility and infrastructure systems, and the link of payments and financing of infrastructure with those costs.

Transparency is an important feature of a good arrangement, since it facilitates the perception of the financing system by all, and particularly by citizens, as well as the adoption of prudent financial decisions. Moreover, among both citizens, who use infrastructure systems, and investors, who pay for their construction, the linkage between costs and payments will also facilitate collection from both categories of users. More specifically, the willingness of every citizen to pay for his own direct costs, expressed through a bill for the use of a service (water supply, waste collection, etc.), is greater than his willingness to pay a higher property tax, where the increase would be a result of the consumption by all citizens. Simply, there is less evasion of payments on the part of both dwellers and investors when they know that they are paying for their own costs, not the costs of others.

Hidden costs, on the other hand, considerably aggravate the taking of rational decisions, since it is not known then, even roughly, who spends what and who is taking, and how much, from the mutual coffers filled by taxes. Secondly, they greatly facilitate the provision of hidden subsidies or profits to individuals or classes of the population, at the discretion of the local authorities. Consequently, transparency is a barrier to corruption in this case, too.

From the standpoint of transparency, a higher mark is given to the impact fee and the user charge, because they are both linked with costs: the user charge is a direct expression of consumption, and the use fee is an expression of investment costs. The other two methods of financing– out of taxes and borrowing – have proven themselves to be weaker, since they are not paid by the one on account of whom something is built; hence, they constitute a collective fund from which only some are taking, while everyone is contributing.

#### **4.3. Fairness**

In this case, fairness will be understood to mean the absence of undeserved spillovers, that is, rents, in different arrangements intended for financing utility activities. The fairness of a system is a desirable feature not only for moral reasons, but also for functional ones. For, when a system is widely perceived as fair, it is then certain that it will operate with considerably less difficulties and be more lasting than alternative systems. In such a situation

both citizens and investors are more willing to adhere to the rules of the system and to act in line with them.

From the standpoint of the fairness criterion, the impact fee has the best track record, since it is based on the principle according to which everybody pays his own bills, that is, the investor also covers the costs which his building will cause in relation to utility infrastructure.

It is possible to consider fair the system of financing utility infrastructure building by borrowing, too, but in a different manner. Specifically, future generations of the population in a given local community will also benefit from permanent facilities, which facilities of utility infrastructure normally are. Therefore, the arrangement that transfers part of the costs to them, too, precisely in compliance with the principle that everyone should pay his own bills, through the servicing of long-term loans out of which the building of infrastructure is financed nowadays, is also fair. This principle can be abused, though, by shifting a (too) large share of the burden to the future generations, together with the explanation, i.e., excuse about fair burden sharing.

#### **4.4. Investments and Economic Growth**

There is no doubt that the construction of residential and business facilities depends on the system of financing utility infrastructure, since different financing systems carry different costs of building. In other words, the costs of construction depend on the choice of the financing system, and so do the volume of building and total investment in building.

Different modalities of utility infrastructure financing have different impacts on the costs of building. The greatest (negative) impact is indubitably made by the impact fee since only that fee includes, or should include, all the costs of the building of that infrastructure and it should be incorporated in total costs of the building of business or residential premises, while other methods (taxes, borrowing and the user charges) do not do that at all, that is, they do not increase the costs of building commercial facilities on account of the costs of utility infrastructure. Consequently, the introduction of the impact fee impacts the most adversely upon investments in the building of commercial facilities, while other financing methods are more stimulating. Of course, the most stimulating method for financing utility infrastructure vis-à-vis investment and economic growth is borrowing, since it pushes all the costs to the future.

Still, there is no such thing as a free lunch, hence all the methods have their flaws. Borrowing, when it is too high, threatens the sustainability of local development, which means that it can be used as a financing method to a limited extent only. Or, the avoidance of the impact fee and the financing out of taxes encourage investments in commercial facilities in the short run, but in the long run the taxation of property is increased in order to raise the necessary funds, which, in turn, decreases the cost-effectiveness of investments.

#### **4.5. Administrative Simplicity**

The last criterion is the criterion of administrative simplicity. Its significance is derived from the fact that the local authorities usually do not possess a great amount of administrative and professional resources, so they should not take upon themselves tasks that are complex in the conceptual sense and demanding in terms of time and operations. This is particularly true in the case of smaller municipalities in Serbia, which lack professional staff.

It turned out that the fee is unfavorable from the standpoint of administrative simplicity, since it is a special, earmarked instrument, which would not have existed otherwise. In addition, an important complication is the calculation of the fee as such, since it is a complex methodological task, which municipalities very often cannot carry out on their own.

Other three financing methods have proven to be simpler, because they already exist, even without the function of collecting funds for financing utility infrastructure, so this new task is just an additional one and it is expressed by using the existing instruments, with an increase in the amount. Thus, for example, the property tax is a standard tax and shifting the role of raising funds for the financing of infrastructure to it would result only in a rise in its rates, without any other operational complications. Admittedly, a rise in the rates could encourage higher evasion, with negative consequences. The same thing is with the prices of utility services, which only need to be raised, with a similar danger related to evasion.

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This brief examination of individual methods for financing the construction of utility infrastructure by means of several reasonable criteria demonstrates all the complexity of the analysis. The main conclusion is that there is no arrangement which is the best according to all the criteria, but rather that parameters of individual financing instruments and other elements of the system for management and use of land and infrastructure, including utility infrastructure, are also of great significance. This will be discussed in more detail later in the report.

## 5. THE POSSIBLE OPTIONS FOR REFORMING THE LAND DEVELOPMENT FEE

The consideration of possible options for reforming the land development fee concentrates on the financing of the utility infrastructure development, i.e. “providing the land” with the capital facilities of technical utility systems.

The utility infrastructure encompasses all facilities of technical infrastructure systems that enable the provision of utilities, whether they are private goods, that is, services for individual consumption (such as: water supply, wastewater drainage, district heating, gas distribution, waste collection, etc) or public goods, that is, the services for collective consumption (such as: construction, cleaning or maintenance of public areas, construction and maintenance of streets, public greenery, storm water drainage, etc).

The development of utility infrastructure implies capacity increase in all segments of technical infrastructure systems. In such development, it is necessary to take into consideration that networks of technical utility systems are not homogeneous. Some segments of the system may be allocated to end users or groups of end users, i.e. these segments serve for the provision of the relevant utility service to such end users only. When constructing the facilities, it is usual to finance all these technical system segments from the “service connection fee”, i.e. to charge investors, or new users, directly with the actual costs of connection to the utility network. The actual costs are charged by utility companies (e.g. water supply companies, district heating companies or gas distributors) or other infrastructure service providers (power distribution company, telephone company, CATV operator, etc).

However, the new users of utility services do not generate only the costs of connection to the existing technical utility system. These users also generate additional demand for some utility service (water supply, for instance), which means that the capacity of all facilities, i.e. not only the segments that serve the new users directly, but all segments of the system, need to be increased by the relevant quantity. In the case of water supply, this means that the capacities of the water intake, water treatment facilities, pumping stations, trunk pipelines, etc. should be increased by the relevant quantity. The question how the investments into these facilities, so-called capital utility infrastructure facilities, are to be funded, particularly for the construction of those facilities that benefit all users of utility services, not only investors, i.e. new users.

The costs of capacity increase for technical utility systems are the so-called long-term marginal costs, i.e. the costs of capacity increase by one additional unit (for example, the additional capacity of 1 litre of water per second). This is the difference between these costs and short-term marginal costs, i.e. the costs of providing an additional unit of that utility service within its existing capacity (for example, the costs of providing an additional litre of water to a consumer). Therefore, the long-term marginal costs are, in fact, fixed costs – they do not change with any change in production volume within the pre-defined capacity. However, this does not mean that they do not change with a change in capacity. The long-term marginal costs usually rise with capacity increase, so that it is usually more expensive to raise the water supply capacity from 300 to 301 l/s, than from 14,000 to 14,001 l/s. This stems from the fact that the most productive solutions, or capacities, are used first, and then those that are less and less productive must be applied.

It is also to be noted that the operation as well as construction of the capital facilities of utility infrastructure shows a very high level of indivisibility. Namely, for numerous technical reasons, the increase in capacity is not continual, but abrupt. A new water treatment facility may have the capacity of, say 2,000 l/s, and this abruptly increases the capacity of the capital facilities of utility infrastructure, i.e. the capacity of technical utility systems. Since this is an abrupt increase in capacity, the costs are incremental and, if divided by the unit of capacity, they can be shown as average incremental costs, i.e. an approximation of long-term marginal costs.

The above specificities refer mainly to networked utilities that offer private goods, i.e. the services for individual consumption. The situation is somewhat different in the case of public goods, i.e. the services for collective consumption. Although it is impossible to precisely delineate “connections” and capital facilities because the end users cannot be identified, it is still possible to differentiate between a local public good in the immediate vicinity of a new facility, which needs to be financed from the impact fee, from a local capital public good, like an inner city by-pass road (“inner ring road”) that benefits all city inhabitants.

Preliminary consideration of the facilities of utility infrastructure points to the diversity of such facilities and their different economic characteristics.

**Table 1. Economic characteristics of utility infrastructure facilities**

<b>Service</b>	<b>Indivisibility</b>	<b>Natural monopoly</b>	<b>Public good</b>	<b>External effects</b>
Water supply	Yes	Yes	No	High
Sewerage	Yes	Yes	No	High
Storm water drainage	Yes	Yes	Yes	High
District heating	Yes	Yes	No	High
Gas distribution	No	Elements	Yes	Moderate
Maintenance of cleanliness	No	Elements	No	High
Waste collection	No	Elements	No	High
Waste disposal	Yes	No	No	High
Construction of public rail transit systems	Yes	Yes	Yes	Moderate
Construction of streets and public areas	No	Elements	Yes	Moderate
Construction of public and other green surfaces	No	No	Yes	Moderate
Construction of cemeteries	No	No	No	No
Construction of public parking areas	No	No	No	No
Bridges, waterfront and river beds	Yes	No	Yes	Moderate
Public lighting	No	No	Yes	No

## **5.1. Alternative mechanisms for utility infrastructure development funding**

As mentioned above, any consideration of the future, or reform, of the land development fee is based on the comparative analysis of various options available for funding utility development, i.e. for funding the construction of capital facilities of utility infrastructure systems.

There are three basic and one auxiliary mechanism for funding this type of investments.

- a) Impact Fees
- b) User Charges
- c) Local public expenses – budget funding
- d) Loans – bridging of excess expenses over time

Loans are an auxiliary mechanism for funding the investments into the capital facilities of utility infrastructure systems, since they only help in bridging a deficit in time. Namely, a loan once taken must be repaid, and the revenues from which the loan is to be repaid inevitably fall into one of the three sources listed first.

The evaluation of each of the above mechanisms, i.e. sources of funds for the investment in capital facilities of utility infrastructure systems is based on the following five criteria:

1. Efficiency;
2. Fairness;
3. Transparency;
4. Investments and economic growth;
5. Ease of implementation – level of administrative demands.

### **5.1.1. Impact Fees**

The Impact Fee (hereinafter, the fee) is, generally speaking, a fee that is, or should be, equal to the costs generated by such investor, i.e. to the costs of development (increased capacity) of utility infrastructure systems. In other words, the amount of fee should be such as to cover long-term marginal costs of utility infrastructure system operation. It is important to mention that the fee does not serve to cover the current, i.e. operating costs of providing utility services, including depreciation. Such costs should be covered from the user charge, where the charge can be collected (private goods) or from a local budget (public goods).

The fee is, in general, an economically efficient method of funding, since it enables that all costs are covered and that the investors, or new users, bear the costs they generate. This further allows for the application of the basic rule of efficiency - the one who generates costs should be the one to pay for them - which creates efficiency incentives for each participant in the game. The equality of the fee with the long-term marginal costs also enables the application of the second rule of economic efficiency - the price (in the most general sense) should be equal to marginal costs. In this way the external effects are internalized in a way, which is a specific aspect of observing economic efficiency in this context. Namely, the investment implementation as such leads to external effects, since the increased consumption of utility services reduces the effective capacity of infrastructure systems, which causes disruptions of supply to all consumers, i.e. all those consumers who had already been

connected to the system and had a regular supply before the investment was made. In this way (by disrupting the supply) the investment has created external effects that can be eliminated only by expanding capacities. The investor bearing the capacity increase costs internalizes the external effects generated by him, which leads to economic efficiency by eliminating the moral hazard.

Naturally, the necessary condition for achieving the above efficiency is to set the fee accurately at the level of actual long-term expenses for each new user, i.e. precisely at the level of expenses generated by the new user. Any deviation to one side or the other (over- or under- estimating) inevitably leads to the impairment of economic efficiency.

However, there is a situation when even the fee defined in such a manner can generate inefficiencies. Everything presented above was based on an implicit assumption that the consumption of utility services by existing users does not change. However, if the existing users are allowed to increase their consumption, they do not bear expenses generated by such behavior. Namely, the increase in consumption by the existing users also exerts pressure on the increase in capacity, meaning that this, too, creates external effects within the infrastructure system. In other words, a part of the need to increase the capacity of utility infrastructure is, or may be, the consequence of an increased consumption by existing users, while the total cost of such a capacity increase is borne exclusively by the new users, i.e. investors. This creates a certain, although not considerable, moral hazard.<sup>1</sup>

The fee also meets the fairness criterion, considering that the basic principle of fairness is that the one who generates expenses should be the one to bear them. For instance, if there were no such new investments, the total costs of system operation would be borne by the existing users through user charges, which indirectly indicates that the solution is the right one, since one group of users does not subsidize the other group of users. The only exception to this is a marginal case when the existing users increase consumption, since the fee results in a situation where the investors, i.e. new users, subsidize the existing ones.

The fee may also be a transparent funding method, that is, in principle, it really is so. The investor knows how much he should pay, why he should pay it; they know it in advance and can make their business decisions accordingly. The *ex ante* business decision made in such a way is sound, since a solid projection of costs was made: in the future the investor, i.e. new user, will bear only the current costs resulting from his consumption, which means that he can perform a sound business calculation *ex ante*. To maintain the transparency of the fee it is crucial that everyone knows in advance all elements of the fee system and that such a system is stable.

At first glance, the fee has no favorable effects on investments or economic and urban growth, since investors' expenses/costs increase. Thereby, it is certain that the introduction of the fee decreases the volume of investments, since some investment projects with the new, increased expenses, may not be able to reach the required rate of return, and thus the investors may give up the investment, or at least the investment in that town. Based on that, one may conclude that the introduction of the fee slows down economic and urban growth.

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<sup>1</sup> The basic cause of increased consumption in the case of general population can be the increase of income, since utility services fall into the category of normal, not inferior goods. In the case of businesses, the basic reason may be increased capacity utilization. Both types of growth are related to economic prosperity.

However, such a selection of investors, in the long run, has a beneficial effect on economic and urban growth. Not only have all costs been covered, but the investment projects implemented are only the economically efficient ones (those that can cover their own expenses), thus fostering the specialization of towns in those investment projects at which they are the best (a kind of territorial division of labor). This creates conditions for an efficient and sustainable economic growth. This means that the initial reduction of the growth rate will be compensated by higher and stable i.e. sustainable rates of economic/urban growth in future.

In terms of impact on economic or urban growth, the fee helps to establish a stable situation in urban growth dynamics. Namely, new investments on which urban growth is based create new utility infrastructure development costs to be covered from the fee. The more investments, the more dynamic the urban growth will be, which means higher inflow of funds from which to fund the appropriate development of utility infrastructure. A lower level of investments, that is, lower level of urban growth, leads to a decrease of inflows from the collection of fees, but also, a lower need for investment into capital facilities, i.e. development of utility infrastructure.

Finally, in terms of application, the fee may be applied both for public and private goods, which means that there are no utility infrastructure facilities that could not be funded by applying this mechanism. The fee, however, is not an easy instrument to apply, that is, it is rather administratively demanding. The first problem in its application is the setting of the fee itself, a methodologically demanding calculation of actual costs that are generated by the investor and that should be borne by him. The procedure leaves plenty of room for error, in an asymmetric way: there is greater likelihood of overestimating than underestimating the costs. The second problem results from the temporal mismatch of revenues and expenses, i.e. the inflow of funds from the fee and the outflow of funds for funding capital facilities of utility infrastructure. The problem is further aggravated in the case of utilities, that is, facilities where strong indivisibilities are present. It all comes down to the issue of financial bridging, and the most prominent role here can be played by loans, but also by local budgets. In other words, the application of the fee should be always considered along with the use of loans and budgets as auxiliary means for financing the construction or development of utility infrastructure.

Open questions of possible application of the fee will be considered if an analysis shows that the fee is a superior way of funding the development of utility infrastructure.

### **5.1.2. User charges**

*User charge* is a cost equally imposed on all users, both existing and new ones. Such cost is proportional to the consumption of the utility service, regardless of whether the consumption is measured directly (by means of water meters, for instance) or indirectly, through an approximation (the number of radiator ribs or the surface area of a flat in the case of heating or waste collection).

The charge can be formulated in such a way that the total revenue earned by the collection of the charge covers all costs: operating costs (including depreciation) as well as development costs. It is undisputable, in terms of efficiency, that the user charge should enable the



coverage of all operating costs (including depreciation), but an arrangement where the user charge covers development costs has some unfavorable consequences for economic efficiency.

Namely, the development costs caused by investors, i.e. new users, are uniformly distributed over all users, meaning that they are to the greatest extent borne by the existing users, although not caused by them. This contradicts the principle of efficiency that the expenses should be borne by those who generate them, which makes room for the moral hazard. In such an arrangement, existing users subsidize the new ones. The only possibility to avoid this is the perfect price discrimination according to the actual expenses generated by individual users. The impact fee, in particular the one set according to actual costs, is a form of such price discrimination. In other words, the correction of such a flaw in the user charge from the point of view of efficiency inevitably leads to its transformation into the impact fee.

There is yet another problem with the application of the user charge from the point of view of efficiency. In the case of natural monopolies, the manufacturers operate in the zone of diminishing costs where marginal costs are lower than the average ones. Since the principle of allocative efficiency requires the charge to be equalized with the marginal costs, compliance with this principle in such conditions would inevitably lead to the financial losses of the utility company in question and its winding up in long term. This problem can be solved in several ways, and the most convenient one, in terms of efficiency, is to establish a two-component charge where one component does not depend on the volume of consumption and the other one is directly proportional to consumption. The first component is intended for covering the fixed costs, and the second for covering the variable costs. The portion of the charge intended for covering development costs would be included in the fixed component. Although, technically speaking this is feasible, still the basic problem cannot be eliminated, this being the discrimination of users according the different (fixed) costs they generate.

The funding from the user charge does not satisfy the fairness requirement, since the costs are not borne by those who generate them. Namely, the existing users subsidize the new users, and this cannot be considered fair in any way whatsoever. True, this mechanism prevents the subsidization in the opposite direction, when, in case of increased consumption by existing users, the impact fee leads to the situation where new users subsidize the existing ones.

The transparency of user charges as a financing mechanism is highly questionable. First, a two-component charge *per se* is not quite clear to the consumer who pays it. It would be very difficult, practically impossible, to make a clear charge breakdown, so that the consumer knows which part of costs makes which part of the charge. Furthermore, at least in towns across Serbia, the user charges for utility services are paid aggregately, so users do not take account of how much they pay for what, but treat it as the “utilities” charge.

As for investments and economic/urban growth, at first glance such way of financing the development of utility infrastructure from user charges encourages investments – since the impact fee is not charged, that is, the existing users subsidize the new ones, the costs of investment projects decrease, thus increasing the number of projects that can be implemented. However, this method of funding utility infrastructure development only redistributes the costs without leading to a good selection of investment projects, and, thus, no account is taken of the comparative advantage a town has for a certain business activity, the appropriate territorial division of labor, or the sustainability of economic/urban growth. Accelerating growth by subsidizing a certain business activity is always possible, but is usually not good.

The implementation of user charge as the source of funding the development of utility infrastructure is associated with many problems. First of all, it cannot be applied in the case of local public goods, that is, those goods where users cannot be charged for their cost. Second, this funding method implies constant user charge fluctuations depending on the expenditures for the funding of the construction of capital utility infrastructure facilities. This implies repeated decision-making on price changes and calculation of price changes. There is also a question of revenue management, since charge revenues are the primary revenues of utility companies, which may lead to the problem of financial management.

In this case as well, there arises the question of financial bridging, as some drastic charge increases are not always possible during the relatively short time when facilities are being built, and, consequently, high expenses, that is, big differences between revenues and expenses, are made. It is, therefore, necessary to have a possibility to raise a loan and support those investment projects that will result in a high leap in capacity.

### **5.1.3. Budget financing**

Budget financing of the development of utility infrastructure impairs efficiency, because it disregards the principle that the costs should be borne by those who generate them. The costs are generated by the investors, i.e. new users, but borne by taxpayers, both those residing in the town in question as well as, generally, taxpayers in the country as a whole due to the existence of the grants going from the central to local budgets. At that, there is no possibility for the taxpayers to have any influence, by adapting, that is, changing their behavior regarding the consumption of utility services or investment projects, on the amount of tax they pay. Therefore, investors make their decisions without facing the total expenses they generate, which reduces economic efficiency.

This method of funding the development of utility infrastructure also violates the principle of fairness stating that one should bear the costs one generates, since taxpayers subsidize investors, i.e. new users. Taking into consideration grants from the central to local budgets, and the principle of budgetary unity, according to which specific types of budget expenditures are not linked to the concrete, specific types of budget revenues, the costs of utility infrastructure development in a town are also borne by the taxpayers not residing in the town, and even if they are residents, by their behavior regarding utility consumption, they do not generate any additional costs, i.e. the costs of utility infrastructure development in the town. Although user charges as a mechanism of funding the development of utility sector also lead to the subsidization of investors, or new users, budget financing results in a much greater dispersion of those who subsidize investors.

As for transparency, it is very low in the domain of collection, since, by nature of taxation, taxpayers do not know the flows, that is, where the funds collected by taxation are going. The use of funds collected in such a way is as transparent as is the public finances system in any country, but, generally speaking, here the transparency is lower than in systems of funding for intended purpose, such as impact fees or user charges for utility services.

In terms of investment and economic/urban growth, the introduction of budget funding has some contradictory effects. Over the short term, the fact that investors do not bear the costs

they generate can increase the volume of investment, i.e. the number of investment projects. However, this results in a poor selection of investment projects, meaning that the economically unjustifiable projects are also implemented. Moreover, budget funding of utility infrastructure development inevitably leads to the increase of tax burden, which adversely affects economic growth. The increase of the tax burden, depending on the type of such burden and inefficiency of allocation of funds collected in such a way, may exceed the amount of impact fee, thus reducing the level of economic activity in long run. Those who are already in business will also reduce the level of production, which will in turn lead to a further slowdown of economic growth.

Finally, in terms of ease of application, namely, operating problems associated with its application, budget funding is not too demanding, is relatively easy to apply, and unlike the user charge, can be applied even in the case of local public goods. However, even in the case of budget funding, there may exist a mismatch between revenues and expenses, since investment expenses for some capital infrastructure facilities may be huge, which raises the question of financial bridging, that is, there is room for the use of loans, or another borrowing mechanism, such as issuing bonds.

#### **5.1.4. Loans**

As mentioned earlier in the text, loans are an auxiliary mechanism for the funding of utility infrastructure development, since the loan repayment must be funded in one of the three already mentioned ways.

While evaluating the ease of application of all the three above-mentioned funding mechanisms, we mentioned earlier that the revenues and expenses may be mismatched, so there may be a need for financial bridging. Accordingly, loans or other forms of funds borrowing improve the application of each of the above methods.

Previous discussion has shown that impact fees are the most appropriate manner of infrastructure development funding.

### **5.2. Basic issues regarding the application of impact fees**

#### **5.2.1. Number of fees**

The first question is whether to charge investors only one fee or several fees, each for the specific capital utility infrastructure facility or for a specific utility activity. The principle that the one who generates specific costs should be the one to bear them imposes the need, in analytical terms, to charge as many fees as there are different capital facilities to be constructed in order to meet the increased demand for utilities. The existence of only one fee, as is the case in Serbia now, would prevent the application of this principle, lead to an over-extensive averaging of costs, and thus to compromising the application of the fee in terms of economic efficiency.

Let us look at the extensive list of possible fees for:

- Water supply and sewerage and storm water drainage
- Transport infrastructure (streets, pavements, horizontal and vertical signalization, such as traffic lights, street trees, street lighting, bridges)
- Parks, squares and other public/free access areas
- Fire fighting service
- Waste collection and permanent disposal
- Public transport
- Culture and art (museums, theatres, etc)
- Ports and airports
- Social welfare institutions
- Schools
- Government institutions
- Heat supply
- Power supply, etc

As we may see, fees can also be introduced for purposes other than those related to utility infrastructure systems, such as cultural or social welfare institutions. Indeed, the idea of funding the construction of capital facilities through special fees competes with the concept of budget funding, thus raising the question of delineation between the two. However, this last issue will not be addressed, since our research is focused only on utilities.

Naturally, in Serbia, there are other methods of funding some of these functions (for example, through public enterprises for power supply and airport services owned by the republic or privatized in future, or through the Ministry of Interior for the fire service) which need not be suggested therefore. However, this will be addressed in the sections to come.

In addition to differentiating between individual utilities, it is possible to differentiate the fees (all or some) by particular territorial units in a town or district. In other words, it is possible to introduce different fees for the same service, for instance water supply, in different areas within the administrative unit depending on the functional inclusion in the catchment area of a particular infrastructure system. The reason for such differentiation naturally lies in potential differences in the expenses needed to raise capacity and quality of water supply services in different areas, that is, different local systems: for example in Mladenovac or Zemun (among Belgrade municipalities). Such differences are usual for American fees. The areas with different fees do not even have to match narrower territorial units, but can intersect them in the case of major facility construction, depending on the infrastructure system to which they belong.

Finally, the question may arise as to whether, from the perspective of users or investors, the fee should be charged to a particular investor as integrated or not. The integrated fee simplifies the collection procedure and decreases its costs (which are not too high anyway), but decreases the transparency of the fee. Therefore, it is probably better to keep fees formally separate, in order to increase the transparency of costs.

### **5.2.2. Special purpose nature of the fee?**

The next important question is: “What to do with the money collected?” To forward it to the budget or to a fund for local infrastructure funding or to several strictly earmarked funds (for transport communications, water supply, sewerage, etc.)? This question cuts into the foundations of the concept of providing utility services, or local community role in it – for example, whether to organize provision of utilities through administrative bodies of local government, public enterprises or private companies – and therefore we will not go into a comprehensive discussion of this issue here, but will briefly discuss these options only from the financial point of view.

Fiscal theory does not, for the most part, support the setting of special purpose taxes and other charges because in such a way, the desirable budgetary flexibility and adaptability of local expenditures to new circumstances or priorities in meeting the citizen needs is lost. Nevertheless, in special situations, fiscal theory allows special purpose funding: when a budgetary process is of poor quality, or when there is a strong connection between the charge and payer benefit. The weaknesses of the budgetary procedure, very common at the local level, prevents the proper funding of particular reasonable needs in favor of minor matters for the reason of political demagoguery, satisfaction of particular interests imposed in the process of public selection, or similar. It may therefore be highly desirable to protect the funding of capital projects, at least because of their long-term character, from the fickleness of some local politicians. Furthermore, special purpose funding gains credibility once the connection between payment and benefit becomes strong, which is the mechanism underlying these fees. A well-regulated connection between the fee and the benefit is, in essence, the surrogate price, which, as we have seen, is the road to efficiency in the field of utility infrastructure and construction in general.

The next question concerns the way in which the funds collected through fees will be channeled to utility infrastructure development funding. The first option is to create fully specialized, special purpose funds, as many as there are utilities, i.e. specific capital utility infrastructure facilities. This option would enable the application of the principle of a strict earmarked allocation of collected funds. The other option is to create a single universal fund where all the proceeds from fees would be pooled, and the allocation of assets from such fund would not be strictly earmarked (strictly by the type of utility), but would respond to the needs and priorities set at the level of town/city or at the level of the entire utility industry, and not at the level of individual utility. Naturally, a combined solution is also possible; for instance, to have strict earmarked allocation in the case of all utilities falling into the category of individual utility consumption (private goods), and to create a single fund, regardless of the particular utility in question, in the case of construction of local public goods.

Strict earmarked allocation provides for a high level of financial flow transparency and good incentives for efficient behavior, but opens the problem of financial management, having in mind, primarily, a high degree of indivisibility in the construction of facilities, and high cash outflows during the short construction period. Consistent earmarked allocation of funds may result in a situation where there is a deficit of funds needed for the construction of a facility for, say, permanent waste disposal, while the earmarked fund for, say, financing water supply facilities records a “surplus”, waiting for the lack of capacity to be manifested, or sufficient amount to start funding, let’s say, a capital water treatment facility. Surely, such situation cannot be viewed as favorable in terms of allocation or management of financial assets. Therefore we may start thinking about earmarked funds, but also about their centralized coordination, and, if needed, temporary “loans”, i.e. bridging.

The next key question is who is, or should be, the investor in new utility infrastructure facilities. The answer to this question depends on the answer to the question who should own the facilities, i.e. the property that makes up utility infrastructure. If this is the property that enables utility companies to operate, as is the case with water supply and sewerage networks, heating and gas pipelines, landfill, and the like, then it is necessary that it should be the property of such enterprises, and the enterprises should be investors. Only in such a way utility enterprises are encouraged to undertake all investor activities, i.e. to control the construction and equipment of facilities in the best possible manner, since in future their operations will depend on the proper functioning of that facility. If the property in question is a public good, in which case utility or other companies appear only as those who maintain those public goods, such as parks, public areas, streets, bridges, waterfronts, and so on, the owner of such property should be the town/city or local self-government unit, and then the local authorities should be the investor. It is clear that the funds allocation system should be such as to ensure a fast and efficient transfer of funds to investors.

### **5.2.3. Fee differentiation and discounts**

Further on, there is the question of the need to differentiate the fee by user, namely, whether all users should pay the fee set in the same manner. Since the fee should equal the costs generated by investor, i.e. new users, for all users the fee should be specified in the same way, according to the actual costs that are generated. Naturally, when identifying such costs some approximations are inevitably used, for example: the projection of the consumption of water in one household based on certain average values or standards (number of household members, daily consumption), since the estimate of consumption for each household individually based on all data about the household would be an overwhelming task.

Let us mention what the fee is not or should not be. Namely, the purpose of the fee is only to cover the costs that will be made by future users with regard to the local utility systems, i.e. (future) funding of utility infrastructure facilities. Such concept varies considerably from the situation in Serbia where the fee, in addition to the above role, also plays the role of an instrument for the capture of the so-called location rent, and so the amount of fee varies depending on the attractiveness of the location or its assumed value. Such an approach may have been justified at the time when there were no property taxes, but now it is not justified any more, since such tax is the basic instrument to tax location advantage or property value, and is used in Serbia with good results. Therefore, the fee under consideration will be defined mostly based on estimated costs, not by attempting to capture location rent. The location factor may affect the amount of the fee, but only through the impact on costs: for instance, if new buildings/facilities are to be built in a remote part of the city territory, and thus entail higher utility expenses.

Second, the fee should not be the means of development policy or social policy at the local level, that is, of fostering the development of some branches of economy, nor should it be a social policy instrument, as is often the case in Serbia. Namely, through differently structured land development fees, Serbia unnecessarily runs the development policy and fosters certain branches of manufacturing or services, or runs the social policy through the differentiation of fees by the estimated level of vulnerability or profitability of certain business activities (textile industry vs. financial services, etc) and other users. This not only continues to run the

long failed socialist development policy, but also wastes money that could be used much better. A far more efficient social policy is, when needed, run through budget expenses (cash grants), but not by differentiation of public revenue, i.e. placing the burden on the user.

If, regardless of motivation, it is estimated that certain user groups should not pay the full amount of the fee, i.e. the amount corresponding to the costs they generate, the shortfall should be covered from the budget, and not by internal subsidization (by increasing the fee for others, non-subsidized users), since such subsidization would lead to very large and harmful distortions and negative consequences for investments and economic growth. Budget funding means that the increase in the number of subsidized users and the level of subsidy (the difference between costs generated and the amount of fee) moves the system of utility infrastructure development funding away from the impact fee, with all its strengths, toward budget funding, with all its weaknesses.

The following questions relating to the application of the fee refer to some specific situations. The first important question is whether in the case of urban reconstruction, the fee should, in principle, be charged only for the difference between the consumption capacity of the old and the new facility, i.e. for the emerging rise in utility service demand, or for the entire amount of new demand, regardless of the demand generated by the previous building/facility. This is an important question, since an implicit assumption that the urban reconstruction is the increase in land use intensity (higher development density or residential density), and thus leads to an increased demand for all utility services. Thereby, it is possible to charge the fee only based on the consumption increase. However, some urban reconstruction projects, particularly those when industrial facilities are removed from the town center, lead to a drop in consumption. For instance, the closure of a brewery, i.e. its relocation out of town, leads to a fall in water consumption, since any new building/facility will inevitably have lower water consumption than the brewery. If the criterion of consumption difference were to be applied, in the case of the relocated brewery, not only that any new user could not be charged a fee, but it would even be necessary to compensate him, due to the decrease in consumption. This is the basic problem with the fee charged only on the basis of consumption difference generated by urban reconstruction projects, i.e. by applying the principle of the net change in demand, and this problem is often addressed in practice by charging an additional fee in case of the expected rise in consumption, while returning nothing in the case of reduced consumption.

The second way is to charge the fee based on the gross change in demand. This means that investor pays the fee according to the total demand he will generate, regardless of the demand that existed with the previous facility. The application of this principle resolves the problem that occurred with the application of the principle of net change in demand, but a new problem arises. If a facility is to be relocated, like the example of the brewery relocated from the town center, should the investor in the new brewery at another location pay the full amount of the fee? If the fee at the old brewery location is charged in the full amount, then the investor should be exempted from the fee, since he already paid the fee when investing in the brewery at the first location. Even more interesting is the question of a brewery moving into another town, for example – how to treat the fee that had already been paid. A solution to this problem is to establish the secondary market of “paid fees” i.e. rights to build facilities without paying the fee. In such market the investor leaving town, who had paid the fee for the development of infrastructure, would “sell” his rights arising from the fee to another investor, or investors.

Another question that emerges is whether the impact fee should be applied when facilities are built under a concession arrangement. The very concept of concession is that the concessionaire, that is, investor into the facility, raises capital. The only possibility to recoup the investment is the user charge. In other words, the inclusion of concession arrangements as mechanisms for increasing the capacity of capital facilities of utility infrastructure inevitably results in the increase of prices, i.e. user charges as a mechanism for funding utility development. The more concessions there are, the more the financing system moves away from the fee and closer to the system based on the user charge.

### **5.2.4. EU grants**

In the years to follow, during the process of stabilization and association or accession to EU, it is possible to expect substantial grants from EU intended for the development of utility infrastructure. In this way the increase in funds available for such purposes may be expected. In other words, it is possible to expect a lower level of the fee than it would be without additional funds – only a portion of infrastructure development costs is covered from the fee. Although the other part of expenses is funded from the budget, this is not related to any tax burden, either local or general, but the funds are obtained from abroad.

What will be the distribution of EU grants by municipalities is yet unknown, but this is not an obstacle for the application of the impact fee. Although there are primarily political reasons to finance the entire infrastructure development in selected municipalities in this way, such approach should be avoided, i.e. the fee should be introduced in all municipalities or local self-government units, while allowing “the subsidization” of the fee to be different in different municipalities.

Everything mentioned above with regard to EU grants also applies to any earmarked grants by central authorities, that is, to any chance that central authorities may get involved in the funding of utility infrastructure to a greater extent. A long-standing practice in Serbia (dating back to the SFRY times) has been that the central authorities “do not meddle” in the affairs of local self-governments, namely, do not take part in the funding of local infrastructure. The introduction of grants into local budgets as such is an innovation in that field, and it is possible to expect the initiation of earmarked grants for utility infrastructure development funding.

Finally, the question is what happens with the funds collected on the basis of the fee, if the expected increase in demand or increase in the expected volume did not occur. In such situations, there is a surplus of funds, that is, some of the planned investments have not been realized. The practice in some countries that have such fees is to return the collected funds to the investors after a period of several years, if the investment into the capital utility infrastructure facility was not realized. In some other countries, the funds are not returned.

### **5.3 Data required for collecting the fee**



As mentioned several times in this study, the basic weakness of the impact fee is its relatively complicated and complex administration that can largely exceed the capacities of an average municipal administration in Serbia.

The first and basic requirement for the application of the fee is to have clearly defined infrastructure development plans. Namely, local self-governments need to adopt plans with precisely specified new capacities of utility infrastructure needed, stating the costs of their construction as precisely as possible. After that step, it is necessary to fairly allocate the costs among newly constructed facilities.

The fairness is, naturally, a rather vague concept, so it is more proper to say that the costs of construction of new capacities should be transferred to the newly constructed facility to the extent to which the construction of the new facility requires such new capacities. The calculation of the specific amount of the fee depends, of course, very much on the particular utility service.

The situation with water supply services is relatively simple. If the plan specifies the construction of a new water treatment facility of the total capacity of 1,000 cubic meters of clean water per second, then the amount of the fee for the facility whose consumption capacity is one cubic meter per second should be equal to one thousandth of the costs incurred by the construction of the facility and its pertaining infrastructure (connection of the water treatment facility to the existing network, and so on). Since the water supply company knows the maximum capacity of the facility under construction (since the company gives its approval for the connection), for computing the water supply fee in Serbia the only requirements that are now practically needed are the plans for the extension of capacity and the appropriate cost estimate for the construction of such an extension. The situation is similar with the sewerage network (wastewater). Since almost all water that enters a facility must leave it through the sewerage network, on average about 80% of the water supplied (except in very specific situations where production processes themselves require a lot of water, like breweries), the capacity of the water connection specifies the capacity of the sewerage connection, so that in the case of sewerage, the only requirement that has to be met by local self-government units is the plan for the expansion of capacity of the relevant wastewater treatment facility.

As for roads and streets, the situation is much more complicated, or may be much more complicated. If, however, the classification of potential uses of facilities is not too detailed, the system need not be too complicated. Our suggestion is to set the amount of the fee on the basis of the expected number of daily vehicle-kilometers that would be generated by the construction of the new facility. The assumption is that residential buildings would generate a relatively small number, and commercial buildings (particularly supermarkets, for example) a relatively large number of vehicle-kilometers. Then the actual cost of construction of a new road or street (that is a known value) would need to be divided by the total number of vehicle-kilometers generated by the construction of the facilities along the road and then multiplied by the number for each particular facility in order to define the amount of the fee for each building/facility. Moreover, it would be necessary to translate all types of vehicles (light and heavy trucks, cars, tank trucks) into equivalent units.

The solution for pavements and street lighting could probably be much simpler, in terms that no special study is needed. It is possible to use several alternatives. One of the options is to use the planned number of occupants (or the number of residential units) in a residential

building, or the number of employees and consumers for a commercial building as the basis for calculating the amount of the fee. In our opinion such solution would be inferior, since sidewalks and street lighting are public goods to the highest degree, where an additional occupant/employee/ consumer does not entail any additional costs of construction, so that such payment collection method would not be a good one. The alternative and, in our opinion, superior suggestion is to charge the fee based on the size of the plot, since the length of the pavement and the number of public lighting fixtures primarily depend on that— the bigger the lot, the higher the pavement/lighting requirements. In that sense, the required data would not be too complex, since the only necessary data would be the total cost of construction and the surface area of the plot.

As for the storm water drainage system, we consider that the land surface area is the only criterion to be used, since the quantity of collected precipitation depends only on that. All other possible indicators (number of occupants, surface area of a building) would be inadequate.

As for parks, we consider that the size of a building (measured by its surface area), or otherwise, the number of occupants/employees, are the best indicators. Parks are, within the given capacity, public goods, but their capacity is, nevertheless, limited.

The remaining issue to discuss here refers to the necessary data for waste disposal. For residential buildings, the only criterion would be the constructed floor area of the facility (considering that the planned number of occupants is not reliable), for shops and service facilities – the size of the shop; for office space – the built surface area; and for production facilities – the size and intended use of the facility, because there are huge differences in the quantity of generated waste depending on industry. The question also arises as to how to define a common price-list in a situation when in the case of residential buildings the fee is charged depending on the number of occupants, and for production facilities on the basis of intended use and size. Theoretically, the answer is possible (according to the quantity of waste the facility generates), but practically some shortcuts or assumptions, would have to be applied.

In sum, the administration of the fee, in the segment relating to the proper allocation of costs among users, would not be too complicated. Cities would need to prepare one or two studies each (for roads and for waste) and it is likely to be quite sufficient. The studies could be more or less ambitious. There is a possibility to prepare a separate study for each expansion of capacity, and there is also another possibility to distribute the fee burden based on some average values. The first option is probably better in the case of water supply systems (because investments are relatively rare and large), while the second option is better suited to frequent, lower-cost investments, such as street construction, for instance. However, the implementation of the fee also requires the presence of detailed plans for the expansion of infrastructure capacity, which may pose a serious problem, particularly in small municipalities throughout Serbia.

At first glance, the impact fee resembles the already applied construction land development fee, but in essence, this is an entirely different philosophy, since investors are requested to pay only the costs they actually generate, and the money paid may be spent only to provide services to those investors and their facilities, which means that the local self-government unit must maintain a database on who, when and exactly for what paid the impact fee. If the option to return the money to investors if the utility infrastructure facilities, for which they

paid, has not been built, and if investors are allowed to trade with the capacities they have already paid for (for example, if in the reconstruction of a plot of land, the new facility requires lower costs of providing infrastructure), local self-governments are then required to maintain the information system capable of following up such changes.

#### **5.4 The method of setting the fee and rights to appeal**

Payment of the fee is a contractual obligation of the investor. A contract is, thus, signed between town/city authorities and their bodies, namely, utility companies, on the one party, and the investor, on the other, where the town/city authorities, i.e. utility companies undertake to provide the relevant utility services. Therefore, the fee is, in essence, an initial price charged to the new user.

For this reason, the manner of setting the fee is the same as the manner of setting the utility service charge. This transfers the problem to the field of economic regulation of utilities. The entire procedure in the economic regulation applied in the case of utility service charges should also be applied in the case of the fee.

#### **5.5 Fee charging options**

In principle, there are two possible bases for the calculation and charging of the fee. The first model would imply separate administration of fees for streets, water supply network, sewerage network, storm water drainage, pavements, parks, waste. The second model would imply aggregate contracting and charging of such fees. A hybrid model would mean that the charging is done by legal entities, so that the fee for water supply and sewerage is contracted with the relevant company, the fee for waste removal with another relevant company, and the fee for roads, pavements, storm water drainage and parks is aggregated for charging purposes, since there are no separate companies providing these services.

We consider that whatever solution is accepted regarding the number of fees (one or more), local self-government units should enable investors to obtain all information relating to the amount and purpose of the fee charged to them in a “one-stop shop”. This would imply the preparation and printing of information brochures with detailed explanations as to who must pay the fee, in what amount and why. Furthermore, one could pay all the fees (or only one fee) there, while any further distribution of proceeds from the fee should not be the investor’s concern. We believe that it is possible that all fee beneficiaries sign an agreement that precisely stipulates the method of charging and distribution of proceeds from the fee at the local self-government level, and, thus, considerably facilitate the investor’s task.

Moreover, it would be useful if the local self-government units (particularly larger ones) would publish maps of all zones with different fees charged together with fee amounts. For instance, a map could present the amount of the street fee to be paid in a new settlement in one part of the town, and the amount of the same fee in another part of the town. Since the costs of road and street construction depend on the specific location (type of soil, infrastructure already in place, need to construct a bridge/overpass), street construction costs must inevitably vary depending on the part of the town.

Municipalities (or another institution calculating and charging the fees) would also have to undertake to provide the investor with a free estimate of the total fee for different locations. Such service would considerably improve the utilization of the sites that already have the infrastructure in place, and thus to a more efficient use of urban land.

## 6. PROPOSAL FOR THE REFORM OF THE CONSTRUCTION LAND DEVELOPMENT FEE

In the previous chapters we have first indicated the deficiencies of the existing construction land development fee; second, we have examined alternative forms of construction financing, i.e., of the development of utility infrastructure and chosen one fee that, at least at first sight, has similar features as our current construction land development fee and, third, presented the most important principles of that fee and possible options for its implementation. In this section, we shall try to operationalize the proposed changes and to corroborate them, thus creating a basis for regulatory changes at both the level of local communities and central level, to the extent necessary.

We also propose a change in the name of this instrument, due to its important applications, so that it can be differentiated from the current development fee, i.e., so that a difference in both its role and character can be more precisely expressed. In the further text, these fees will be called fees for (utility) infrastructure or infrastructure fees.

### 6.1. Purpose of Infrastructure Fees

The purpose of the funds raised through these fees is, of course, the financing of infrastructure, since, as we saw, earmarked financing through the fees makes sense from the financial and budgetary standpoint not only as a good instrument, but, more importantly, as an instrument which can result in a more efficient use of construction land in Serbia, if properly used. Still, such a global position is certainly not enough, so we shall try and suggest in the further text some important features of the system for the use of that revenue.

The basic question here is whether the purpose of the revenue from certain fees should be strictly predetermined, in terms of an obligation to use, for instance, the revenue from the fee for water supply exclusively for the building of water supply facilities, or it can be more flexibly used for the building of some other facilities of utility infrastructure. Moreover, a question is raised whether in such a case an arrangement should be provided for according to which the collected money from one fee is to be returned to the payers if it has not been used for planned investments into the given activity in the prescribed time limit, or the “borrowing” among different narrowly specialized funds should be allowed.

This strictly dedicated system has its own logic and political attractiveness and it is frequent in the United States of America. Specifically, it has a politically desirable feature: it is easier to garner support for it among citizens, as well as lawmakers, because it is almost a guarantee that the money will be spent on a planned and proper purpose and that it will not be used for any other purpose, for example, for wages or similar purposes that are popular among local politicians and in the administration of the local authorities, which is a concern for both citizens and lawmakers. This political argument has certain plausibility, although the U.S. experience shows that making refunds to investors is extremely rare,<sup>2</sup> because the local authorities have found ways to avoid this worst case scenario.

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<sup>2</sup> See *State Impact Fee Enabling Acts*, Dunkan Associates, 2007, p. 10

On the other hand, there are certain weaknesses of this strictly dedicated arrangement with respect to resource allocation. This involves the fact that there are significant indivisibilities in the case of utility infrastructure, particularly in some utility activities, that is, the facilities of their infrastructure. These indivisibilities give rise to a lack of coordination in time between expenditure for the building of new capacities and revenue from collected fees. Moreover, the indivisibilities of capacities create a considerable reserve capacity over a prolonged period, i.e., new users are connected to such reserve capacity of the system. In other words, while at a certain point in time, that is, period, there is no need for new capital facilities in the case of one type of utility infrastructure facilities, in other utility activities there is a great need for that. A strict distribution of resources for specified purposes means that in such situations an earmarked fund for one utility activity will run a surplus, while an earmarked fund for another activity will run a deficit.

It is obvious that this problem should be resolved while preserving all the advantages of earmarked use of the collected resources. To this end, it is necessary to reach a compromise. Therefore, we suggest the establishment of two earmarked funds into which the resources will flow: one should be the fund for financing capital facilities in the field of individual utility consumption, i.e., the provision of private goods (water supply, of wastewater drainage, district heating, gas distribution, permanent waste disposal, etc.), and the second one should be the fund for financing capital facilities in the field of collective utility consumption, i.e., the provision of public goods. In this manner, the necessary flexibility of financing would be achieved in line with clearly set priorities, and a situation prevented where the money collected from one infrastructure fee would sit idle, or even be returned to investors, while in some other utility activity there would be insufficient capacities and a considerable shortage of resources necessary for financing investments to overcome that problem. The arrangement with the existence of two funds is based on several important differences which exist between these two types of utility activities.

First, in the case of private goods, services are rendered directly by companies, for the time being public utility companies, and it is only natural that these companies should be investors, i.e., that they should carry out those investments, since those fixed assets will enable these companies to operate, i.e., to provide relevant utility services. Conversely, local public goods, i.e., the services of collective utility consumption, are not provided by utility companies (they may, instead, take part exclusively in the maintenance of these goods). Therefore, it is natural for the investor into those facilities to be a local community, that is, a local self-government unit.

Second, major indivisibilities can be found precisely in the case of capital facilities of individual utility consumption, such as water factories, water supply main rings, heating plants, landfills for permanent waste disposal, etc. In the case of public goods, i.e., the facilities of collective utility consumption, for the most part there are no major indivisibilities. Exceptions may be bridges over large rivers. Moreover, there is even certain complementariness, rather than rivalry among investments in local public goods: investments into new streets also imply investments in pavements, lines of trees, storm water drainage, street lighting, appropriate public areas, etc. In other words, due to the existence of major indivisibilities, precisely in the field of private utility goods, one should expect a great need for financial “bridging”. Consequently, it is important to strictly separate these activities from other ones, where there will be no need for so much gap bridging.

Third, the privatization of some public utility companies can be expected in the foreseeable future. That privatization will inevitably bring about further changes in the status of the fee for the development of utility infrastructure, namely in the direction of further selectivity of its purpose. Privatization is realistic exclusively in the field of private goods, so such dual structure of funds means that changes will occur only within one fund.

The fee for utility infrastructure for each individual utility activity should always be levied, irrespective of whether there is an immediate need for the construction of new capital facilities or not. Thus, for instance, if the existing water supply system in a city meets all the present and projected need for water supply in the foreseeable future, then the infrastructure fee for water supply will not be eliminated, but rather levied in the future as well, with this revenue being directed into the mentioned fund, that is, into the financing of facilities in other utility infrastructure activities, where the situation is the most unfavorable in that respect. Furthermore, if one takes a closer look at the logic of infrastructure fees – everybody paying his own bills – it is possible to see that the investor should pay not only for investments in new infrastructure facilities, but also for the use of the capacities of the existing ones. For, if the principle is for everyone to pay his own bill in full, then it is natural for new users to also pay for the use of current capacities, since these costs, too, should be included in that total bill. In line with that, in many U.S. states laws allow local authorities to use the collected fee as compensation for the previously invested funds in local infrastructure.<sup>3</sup>

## 6.2. Types of Infrastructure Fees

As previously mentioned, infrastructure and related fees can be introduced for very different forms of social life, and particularly when the notion of infrastructure is expanded to include social infrastructure as well. Still, we shall make a proposal here, which is limited to utility infrastructure in the narrow sense, namely the one whose investment financing, in line with the applicable laws, falls into the competence of local communities.

More specifically, in choosing utility activities whose development should be financed out of fees, one has also paid attention to whether the mentioned activity can be performed against the backdrop of competition, i.e., whether competition can be established in the mentioned activity. If that is the case, i.e., if these are not the so-called network activities which have all the features of a natural monopoly, one should not levy a fee to finance the development of capacities within that activity. Simply, in this case, the capacities are developed by competitors operating in that activity, regardless of whether competition is direct competition among competitors themselves (e.g., as in public bus transportation) or their indirect competition (such as the competition over the grant of the right to collect waste in a particular territory). Accordingly, in such cases the development of capacities cannot be financed by means of fees, since it is not known which capacity, that is, part of the capacities, will be developed by an individual (current or future) competitor.

Consequently, the following fees for utility infrastructure would be levied:

- a) Private goods:

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<sup>3</sup> This does not involve operational costs, including depreciation, since those costs should be covered from the price of the service.

- for water supply
- for drainage and purification of waste waters
- for permanent disposal of, i.e., care for solid waste
- for district heating
- for gas distribution

b) Public goods:

- for traffic (streets, pavements, local roads, storm water drainage, bridges, horizontal and vertical traffic signs, street trees/greenery, street lighting, etc.),
- for public areas (squares, parks and public greenery, cemeteries, waterfronts, recreational areas, etc.),

Besides establishing a large number of strictly earmarked fees, it is necessary to also geographically define the collection of fees, i.e., to define it according to the specific infrastructure system to which the observed facility belongs. In other words, the fee is collected and the thus raised resources are pooled for developing the capacities of a specific infrastructure system on which the burden is increased due to the construction of a new facility.

This will enable the solving of an urgent problem in the existing system, connected with the question of how to treat villages, i.e., rural communities, that is, whether to levy the construction land development fee on them or not. Practice in Serbia varies – in some villages, the development fee is levied, while in most of them it is not – and the mentioned dilemma is created due to the fact that all utility activities and services, which exist in neighboring cities, certainly do not exist in villages, so it is not fair to levy the same fee on those living in villages and those living in cities. Hence, the replacement of one fee with many fees, namely based on the functional principle, will enable the collection of only those infrastructure fees in villages, which will benefit the inhabitants of villages, and not of other ones, which resolves the mentioned problem. Thus, for instance, fees will be levied for public transportation or for traffic, while the fees for installation of district heating, water supply or waste collection will not normally be levied.

### **6.3. Criteria, Formula**

This section will present a proposal for the criteria and operational measures by means of which one should calculate infrastructure fees in Serbian municipalities and cities.

The first principle which should be observed has already been mentioned, and that is the principle according to which investors (and users) should contribute to the financing of individual utility infrastructure facilities in line with their consumption of the given service. Since it is a cost-based principle, the level of the fee must be in direct proportion to their (future) consumption.

The second principle is contained in the first one, but it may be insufficiently discernible, so we shall present it explicitly, and it is a classical principle of fiscal fairness. It reads that the equal should be treated equally and the unequal unequally. In other words, those should pay



equal amounts who put equal burdens on local utility systems, and those who put different burdens should pay unequally.

These two principles very clearly exclude from the circle of options all those based on the idea of redistribution, or so-called solidarity, when better-off taxpayers pay more than those who are not doing so well, for social or so-called developmental reasons. As already mentioned before, social reasons and reasons related to development policies, as they are implemented in Serbia today, have no place in this concept of infrastructure fees; instead, it has to rely exclusively on the (estimated) consumption of individual utility services. And if, for instance, different planned facilities (residential buildings, office space, industry, etc.) consume the same amount of water, then they should pay equal fees for water supply. Nothing more and nothing less. Only in that manner it is possible to secure efficient use of urban land and fairness of the system for financing utility infrastructure.

If these principles for setting infrastructure fees are accepted, then it boils down to a technical problem of obtaining data, though it is by no means trivial or irrelevant as a problem. Specifically, the main difficulty is in the fact that, at the point of calculation of infrastructure fees, practically no single piece of necessary data is available, but one has to work either with estimates or with proxy variables, hence those which can replace and/or express, to a smaller or larger extent, accurate data on both the future value of capital infrastructure facilities, and on the future consumption of utility services by various new users.

Let us take these issues one by one. In the case of residential facilities, there are two realistic indicators which could be an expression of future consumption of services in utility activities: the first one is the number of permanent household members, and the second one is the constructed area of the facility. The third option – to include the facility as such in the calculation, as a unit, is certainly not fair because declaring that all houses are equal ignores objective but considerable differences which occur in consumption across various households. The advantage of this last indicator is easy access to data – each house or apartment for which a permit is sought becomes that piece of data, without other complications.

Let us go back to the two realistic options. For some of infrastructure fees the criterion of the constructed area of the facility is entirely appropriate, as in installation of district heating, since the load on the heating plant is largely proportionate to the area of the house or apartment. Of course, it is possible to make a difference in the calculation between individual and collective residential buildings, as individual houses need more calories for equal amount of heat, due to technical reasons. The area of an apartment, that is, its share in the total area of the collective housing facility can be used as a weight for setting the fee, if it is possible to come across a direct indicator of consumption. For example, in the collective housing buildings an indicator of the maximum possible water consumption for the entire building is the diameter of the connection. On the basis of that diameter, it is possible to determine the fee that will be collected from the investor, and the total amount of the fee, if need be, can be distributed by apartment according to the constructed area of each apartment.

In the case of the use of parks and recreational and similar spaces, for example, the number of household members is probably the best measurement of the load (use), while the area of the apartment or house plays no role. However, the number of household members is not used anywhere as a variable in the calculation of such fees for the most part because (1) the records of the public authorities on the current residence of the population are incomplete

and/or outdated and (2) the situation is highly volatile and susceptible to manipulation, i.e., changes aimed at avoiding the payment of dues, hence of these fees as well. Therefore, we suggest avoiding the use of this indicator in Serbia.

With respect to many other infrastructure fees both the number of dwellers and the area of the building or apartment could be an indicator of the load placed by the users of future residential facilities. Although it appears that the number of dwellers is the only good indicator, it is certain that households with higher incomes (consequently, with more apartment space) have higher consumption in *per capita* terms than households with lower incomes. Since, as pointed out, the number of household members should not be used as an indicator, we are left with the area of a building as an indicator and it is customarily used in the U.S. and in Serbia, and it should be also used in the future in our municipalities and cities. Still, there is a reasonable belief that consumption of services in utility activities does not increase in proportion to an increase in the area of a residential facility, so the owners of larger housing units pay more than they should. If that belief prevails, it is possible to establish a degressive scale with the area as the only variable. In a general case, it would look like this:

$$N = F + a \cdot P$$

where N stands for – the amount of the fee, F – for a fixed component whose level does not depend on the area of the facility, a – for a coefficient for each square meter of the area and P – the area of the facility. This formula ensures that the amount of the fee goes up at a slower pace than an increase in the housing space area. Let us mention another alternative: setting a cap on the housing facility area, in that a particular fee is not increased above a certain limit for the area.

In the case of water supply facilities, it is possible to clearly distinguish several categories, such as production (industrial) facilities, office space and business premises and premises for trading. The purpose of such a classification is to place into one group those facilities which, based on the same purpose, have the same or similar consumption of utility services per selected unit. Insisting on a very detailed classification (e.g. industrial branches) can become problematic due to the unavoidable appearance of a large number of multi-purpose premises, with attending complications.

For the basic, previously mentioned, classification the use of the facility area indicator is absolutely satisfactory, of course, with different values for production, trading and office space. In detailed classifications, other possibilities also open up: in hotels - the number of rooms, in movie theaters – the number of seats or the facility itself as a unit in gas stations or trailers.

If for some larger industrial or commercial facility the planned consumption of a service significantly deviates from the average applied in the calculation of the fee, it is possible, at the request of either the investor or the local authorities, to make a separate calculation for that facility and apply, as more realistic, the consumption level projected in the technological design of the facility,

The location should not be such criterion as it is presently in Serbia, since new fees will not serve to collect city rents, but only real costs. Yet, the location may be included in the calculation in a slightly different manner – as a factor of future costs. If, for example, a water

supply system is built only in one city of a municipality, then only investors from that city should pay the fee for water supply, but not the investors from surrounding villages. In other words, it is possible to divide the given territory of a municipality or a city into separate areas in which one fee will be applied in different amounts or not be levied at all in part of the territory. In that sense, the location is important only as a basis for identifying to which local infrastructure system the observed facility belongs.

To sum up, we suggest, if there is no direct technical indicator of the expected consumption of utility services, using the area of the facility as a standard indicator of the expected consumption of utility services, since it is an indicator which gives a fairly good approximation of the consumption 'capacity' of the facility, and it is readily available in the standard case, as it is incorporated in the design submitted to the construction authorities. Only in some specific situations other, previously mentioned, indicators are possible.

The table below shows some of the possibilities for formulating the amount of the fee.

<b>Fee</b>	<b>Primary criterion</b>	<b>Secondary criterion</b>
Water supply	Diameter of the connection	Area of the facility
Sewerage	Diameter of the connection	Area of the facility
Waste disposal	Area of the facility	Purpose of the facility
District heating	Area of the facility	Cubic volume of the facility
Gas distribution	Diameter of the connection	Purpose of the facility
Transportation	Projected traffic	Area of the facility
Public areas	Area of the facility	Area of land

#### 6.4. Exemptions and Deductions

Since the concept, as already mentioned on several occasions, relies, for good reason, on the principle of covering one's own costs and avoiding the spillovers between investors and users, for the sake of improvement in construction efficiency and use of land, one can only repeat on this occasion, too, regarding the issue of exemptions and deductions, that no discounts for reasons related to social or developmental policies should exist. Besides the mentioned reason – coverage of one's own costs – it is possible to mention another two:

- in this case there certainly is no need for deductions based on social considerations, since, by definition such individuals are engaged in investing into real estate, i.e., building residential and commercial facilities, who are not poor, and those firms that are not in a poor financial state, consequently, those who dispose of considerable funds,
- there is also no need for deductions associated with developmental policies because, first, the ideas from the socialist period about how to boost economic development should be definitely abandoned, since the market and the financial system are becoming the entities allocating investments and, second, modern policy of local economic development is not pursued at the cost of undermining the efficiency of construction, but rather in some other ways.<sup>4</sup>

<sup>4</sup> See *Strategy for Local Economic Development - Handbook*, CLDS, 2005

If a local community nevertheless decides to give privileges to certain users, for example, for social reasons, the best way to preserve the consistency of the system is to set aside the resources for such deductions in the local budgets, so as not to undermine through deductions the principle of paying for one's own bills, and exclusively his own bills.

Of course, not all the fees would be paid for all categories of construction and facilities, but only those that will benefit the given category of building, immediately or in a foreseeable future. Thus, for example, the fee for the installation of district heating would not be collected from those investors whose facilities are not planned for connection to the district heating system and who are solving the issue of heating for their facilities by themselves.

### **6.5. Possible Procedure for Setting Infrastructure Fees**

The procedure for setting fees could be the following:

1. make projections for the building of individual categories of facilities (residential, production, etc.), namely, both by area in square meters, and by location, on the basis of plans for the development of a local community, spatial and zoning plans and other technical documentation; the time horizon of the projections should be at least five years,
2. make projections of a rise in the consumption of certain types of utility services (water, waste, streets, etc.), on the basis of the projection of building and normal standards of consumption for individual categories of users (households, industry, office and trading space, etc.),
3. estimate investments that should be made in order to achieve an increase in capacities necessary to meet higher consumption needs,
4. choose indicators (area, etc.) and calculate fees by category of facilities, by dividing the aliquot part of investments induced by the given category of facilities with the estimated consumption of the service per square meter (or some other indicator).

In this or a similar manner, it is possible to set all the envisaged fees.

The reevaluation of the fee should be carried out in two manners: 1) for the purpose of ensuring protection against inflation-related erosion of the value, reevaluation is to be performed every year and 2) for the purpose of including new data in the evaluation (changes in projections, new prices of the construction of capital facilities, etc.), investment valuations should be renovated (refreshed) every two or three years.

### **6.6. Directing Collected Revenue**

Collected revenue would be directed into two mentioned funds (for private and public goods) from which only investments would be financed. These resources should under no circumstances be included in the budget, since that would threaten the possibility to finance

utility infrastructure facilities due to probable spillovers into other purposes not related to infrastructure, which depend on the political process at the local level.

These funds should by no means be used for financing current maintenance of utility infrastructure facilities and their daily functioning, since resources for those purposes are secured out of current revenue of utility companies, and since prices of the services should be increased, if they are not sufficient, rather than using the money earmarked for investment.

### **6.7. Necessary Legislative Changes**

The application of the new concept, i.e., new fee for the development of utility infrastructure requires amendment of Article 74 of the Law on Planning and Construction, which now reads: „The construction land development fee shall be paid by the investor. The level of the construction land development fee shall be determined in a contract concluded between the municipality, i.e., a company or another organization referred to in Article 72, paragraph 3, of this Law, and the investor, on the basis of criteria and standards established by the municipality. The contract referred to in paragraph 2 of this Article regulates mutual relationships in respect of development of construction land, the level of the construction land development fee, the fee payment schedule, and the volume, structure and time limits for the performance of land development works.“

Bearing in mind the proposed changes, it is necessary to replace the words „on the basis of criteria and standards...“ by the words „on the basis of actual costs for expanding utility infrastructure capacities, which are generated by the new facility“.

On the basis of such amendment to the Law, local self-government units can specify in their decisions all the required elements on the basis of which a decision is taken.