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Funding of urban development: the case of tourism

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The research reported in this article aims at assessing how land capture direct instruments applied at the municipal level can allocate for the social interest the land unearned increments that stem from public decisions concerning the implementation of territorial plans and/or changes in land uses or land use intensities. More specifically, herein are presented the theoretical framework, methodology, results and conclusions of a proposal of a kind of non-negotiable development obligation - applied at the Municipal level - aimed at capturing at least part of the land betterments engendered by plans concerning the allocation of concrete building capacities, objectively computed from the parameters settled in Municipal Master Plans, Urban Development Plans, Detail Plans, parcelling out procedures, or other instruments of territorial management. It is based on an economic assessment method that consists in charging landowners/promoters a 20% fee on land betterment values that result from the assignment by urban plans of specific building capacities to urban interventions especially targeted to tourism uses. The proposed methodology is applied to the Urban Development Plan of the Planning Unit 11 of the municipality of Lagoa, located in the Algarve, Portugal.

These non-negotiable development obligations may be easily applied to other municipalities, within the scope of different kinds of urban plans. They ensure that the betterments they engender are pointed to social purposes. And they further support municipal economic and financial sustainability based on a strategic and integrated planning perspective.

Keywords: Value capture; economic and financial sustainability of urban developments; non-negotiable municipal developer obligations; territorial planning legislation.

1 Theoretical background

Land planning decisions concerning territorial planning development and/or implementation, or changes in urban land uses or intensities of use generally entangle rises in land values, usually termed as unearned increments or betterments (Alterman, 2011; Walters, 2012). The concern for the land social function, which consists of recapturing those unearned increments/betterments, reverting them afterwards to the population's social interest is longstanding in planning literature (Ingram and Hong, 2007; Netzer, 1998; Rebelo, 2009, 2012; Smolka and Amborski, 2003, 2007). It makes up the core of Land Value Capture (LVC) policies and instruments. These are taxed-based

land policies and instruments, which – through returning to communities the land unearned values that accrue from planning decisions and public investments - assure additional income to public administration (Ingram and Hong, 2012), supports welfare redistribution, and controls land prices (namely encouraging the provision of land for urban development (DGOTDU, 2011). However, these policies and instruments have been adopted unevenly around the world's planning systems, and the narratives of their application point out to divergent reasons for their success or failure. A consistent and coherent body of knowledge, duly supported on practical cases, is still missing.

The overall legislation on land, territorial ordering and urban development was recently reviewed in Portugal – that has culminated in the enforcement of the new Land Planning Act (Lei nº 31/2014) -, in strict coordination with the revision of the juridical regime of Urbanization and Edification (DL nº 136/2014), the juridical regime of Territorial Management Instruments (DL nº 80/2015), the new Cadastral Law, as well as the revision of municipal master plans and respective regulations and of other territorial-based legislation. It was intended to surmount some shortcomings and troubles that have accrued from the application of the previous legislation, that have often revealed contradictions, superposition of regulations on the same territories, and lack of support to the development of integrated inter-municipal policies (www.portugal.gov.pt).

The whole new legislation founds on a completely new approach to planning, adopting the perspective of its proper economic and financial sustainability, thus urban development plans and licenses should only be approved if projects are prone to engender incomes equal or higher than the charges they will involve, what should be duly justified by technical, economic and financial reports.

The proposal herein presented describes in detail a new non-negotiable development obligation designed to support land policies, and applied at the Municipal level, aimed at capturing part of the betterment values accrued from the assignment of concrete building capacities by plans. They are computed from statistical feasible data, and from the parameters settled in territorial plans and other instruments of territorial management.

2 Methodology

To recover at least part of the betterments that accrue from planning decisions or public investments, the following steps were pursued for the studied municipality: (i) identification of concrete building capacities/m² enabled by enforced territorial plans in the different municipal territorial areas; (ii) computation of the average

infrastructure costs/m², construction costs/m², and underlying land costs/m², according to market trade; (iii) assessment of the municipal land value/m² that results from the application of the Real Estate Municipal Tax Code; (iv) computation of the difference between market land costs/m² and legal land costs/m² according to the two previous values for the different municipal areas, taken as an approach to betterments/m²; (v) valuation of identified building capacities/m² by the previously identified betterments/m² of urban buildable land; (vi) computation of 20% of the previous value that represents the potential collectable value that results from the levy of the proposed non-negotiable development obligation to promoters and builders, in order to recover part of the unearned increments that accrue from the building capacities/m² assigned by enforced plans (figure 1).

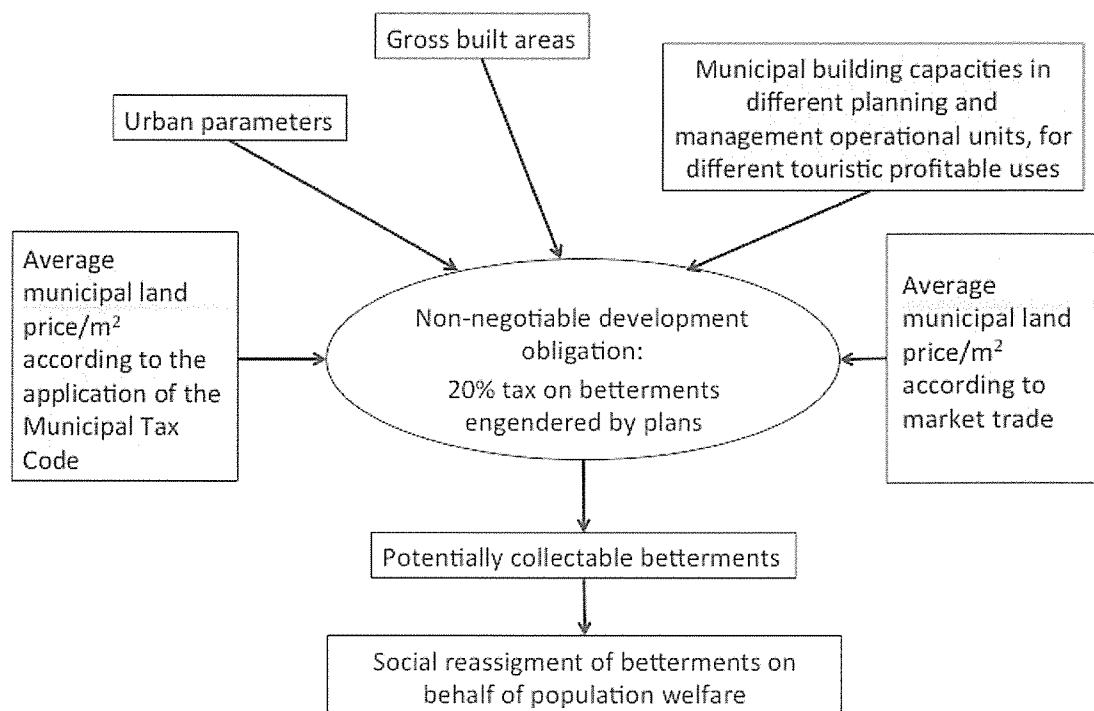


Figure 1. Methodology pursued to compute land collectable betterments/m² due to building capacities assigned by plans.

The concrete average building capacity/m² means the gross built surface (m²) licensed by plans in a certain execution unit, intervention area or urban development operation. Its computation results from the product of total gross built surfaces licensed to different kinds of uses by respective occupation and use indexes, weighted by each percentage in the total surface of the execution unit or intervention area, summed up for the all considered municipal areas.

The land price/m² based on market transactions is given by the municipal price/m² (according to town property trade) net of average infrastructure costs/m² and average

building costs/m². The proposed approach to betterments/m² is reckoned through the difference between this average municipal land price/m² and the corresponding tributary patrimonial value of buildable land/m² (according to the enforced Real Estate Municipal Tax Code).

The total amount of betterment is, finally, given by the product between these computed betterment values/m² and the concrete building capacities/m² for the anticipated uses of all the plots in the execution unit or urban intervention area.

Finally, the proposed potential capture of betterments – according to this non-negotiable development obligation - amounts to 20% of the previous computed value. A discussion is pursued on the social reassignment of betterments accrued by plans on behalf of the general social interest.

3 Case study

3.1 Territorial Plans enforced in the Municipality of Lagoa

Lagoa Municipality is located in the south of Portugal, in Faro district, by the sea (figure 2). It covers an area of 88,3 km², and lodges a population of about 22 791 inhabitants (INE, 2011). Most of its population work in the tertiary sector, which represents 84,8% of its total employment, whereas its homologous values in the Algarve region amount to 82,5%, and to 65,3% in the continental Portugal (INE, 2012).

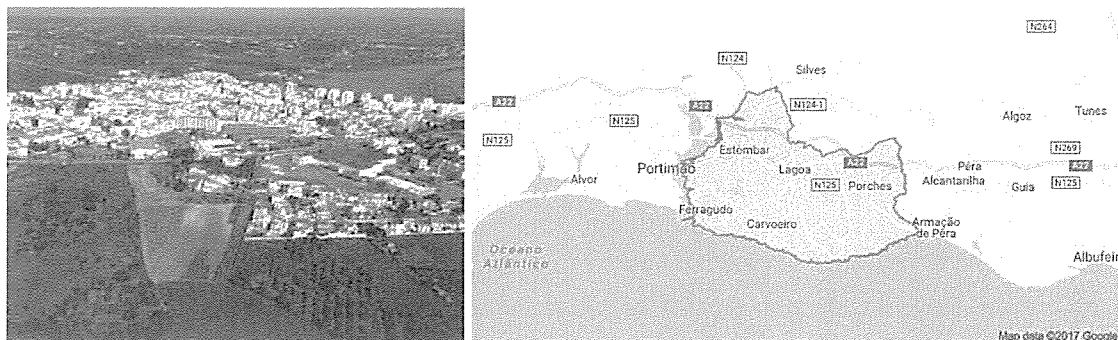


Figure 2. View and location of Lagoa Municipality (Algarve) (source: www.google.com).

The plans enforced in the Municipality of Lagoa are: the Municipal Master Plan of Lagoa (RCM n° 29/94, Aviso n° 26197/2008, Aviso n° 3872/2012); the Urban Development Plan of the Planning Unit 1 – UP 1 from Ferragudo to Calvário (RCM n° 126/99, Edital 613/2009); the Urban Development Plan of the Touristic Capacity Area of the Planning Unit 12 - UP 12 (Declaração n° 56/2008); the Urban Development Plan of the Planning Unit 11 - UP 11 (Aviso n° 44845/2008); the Urban Development Plan of the Town of Lagoa (11622/2008); the Ordering Plan of the seashore of Burgau-Vilamoura (RCM n° 33/99); the Regional Plan of Territorial Ordering PROT – Algarve (RCM n°

102/2007; RCM n° 188/2007); the Plan of the Hydrological Basin of the Algarve Streams (DR 12/2002); the Regional Plan of Forest Ordering (PROF) of Algarve (DR n° 17/2006); the Natura 2000 Network (RCM n° 115-A/2008); the Partial suspension of the Regional Forest Ordering Plan (PROF) of Algarve (Portaria n° 78/2013); and the Management Plan of the Hydrological Basins that take part in the Hydrological Basin 8 (RH8) – PGBH of the Algarve Streams (RCM n° 16-E/2013).

The Municipal Master Plan of Lagoa settles the urban developed and developable areas of Lagoa, Estômbar, Porches, Aldeia de Luís Francisco, Ferragudo, Corgos, Bela Vista, Parchal, Mexilhoeira da Carregação, Pateiro, Calvário, Carvoeiro, Poço Partido, Sobral and Torrinha for building purposes. The main goal of this Municipal Master Plan consists in assuring a balanced development, thus promoting rational uses of spaces, as well as the management of resources and heritage preservation so to stand up for its population's welfare. In line with these concerns, it allows changes in its planning and management operational units - UP 1, UP 2, UP 3, UP 4, UP 8, and UP 9.

This Municipal Master Plan settles planning units UP 7, UP 10, and UP 13 - with current touristic uses as well as the adjacent interstitial tissue - as touristic occupation areas. Furthermore, the Touristic Capacity Areas include the Touristic Development Nuclei - planning and management operational units UP 5, UP 6, UP 11 and UP 12. In these areas are enforced the land use, occupation and transformation regimes settled in ordering plans, restriction plans, and the proper Municipal Master Plan, till the approval of the Touristic Development Nuclei (that are assigned up to 25% of the Touristic Capacity Areas).

Touristic Development Nuclei, by their turn – according to the Municipal Master Plan - must be aimed exclusively at touristic uses (thus excluding incompatible uses), mustn't include natural parks or reserves, should adopt high standards of quality, and provide leisure facilities. It also should be able to support its own infrastructure costs, and share the costs of municipal infrastructure. Each Nucleus may include different touristic undertakings, provided they are served by a common infrastructure network, and belong to the same Touristic Capacity Area.

The Planning Unit 11 (UP 11) covers 401,6 hectares in the parishes of Lagoa and Carvoeiro, in the municipality of Lagoa. Its intervention area spans from Marinha beach to Cabo Carvoeiro. Its Urban Development Plan defines it as a Touristic Capacity Area (AAT) - that can include one or more Touristic Development Nuclei (NDT) – and sets parameters for land occupation, use and transformation in its intervention areas.

The goals settled for the Touristic Capacity Area of UP 11 convey the implementation of two Touristic Development Nuclei (NDT): East NDT and West NDT (that should both respect landscape natural and cultural values, and the ecological structure). Both of

them should cover a total area of 997 737 m², that mustn't exceed 25% the total area of 4 016 158 m² of the UP 11 settled in the Municipal Master Plan of Lagoa (thus East NDT was assigned an area of 741 890 m² and West NDT an area of 255 847 m²).

The intervention area of UP 11 includes both urban and rural land. The former includes the developed urban area of Benagil, the touristic-urban area located at Carvalho beach's north (Clube Atlântico), and two touristic-urban areas located near Alfanzina (which are urban areas outside the Touristic Development Nuclei settled in the Municipal Master Plan). Whenever parcelling out operations are enforced, its license's guidelines should be pursued. The latter – that conveys land which urban development may be programed - encompasses the new touristic areas inside East and West NDT's. It mustn't surpass 30% of the total area of the Touristic Development Nuclei. This urban development land should respect the building regime of respective planning and management operational sub-units, according to the classifications licensed in touristic undertakings. The East Touristic Development Nucleus is implemented through N1 and N2 planning and management operational sub-units, and the West Touristic Development Nucleus through P1 and P2 planning and management operational sub-units.

It is further settled by the Urban Development Plan of UP 11 that the touristic undertakings in each nucleus must conform to four-star or higher touristic lodging categories. The East Touristic Development Nuclei is assigned a maximum of 1 279 beds, whereas the West Touristic Development Nuclei is assigned a maximum of 441, what amounts 1 720 beds.

3.2 Application of the non-negotiable development obligation to the Planning Unit 11 in Lagoa

The annual average of gross built surface (for developed and developable urban land, expressed in m²) in the municipality of Lagoa was estimated through the product between annual finished buildings¹, the average number of storeys per building, the average number of dwellings per storey, the average number of compartments per dwelling and the average liveable surface per compartment, divided by 0,65 (assuming the liveable surface amounts to about 65% of the gross built surface) (table 1). A four-year period was adopted for the computation, in order to avoid situation fluctuations (INE, 2009, 2010, 2011, 2012).

Table 1. Annual average of gross built surface in the Municipality of Lagoa (for 2008, 2009, 2010 and 2011).

	2008	2009	2010	2011	Total	Average
Total number of finished buildings (1)	228	137	114	64	543	136
Average number of storeys per building (2)	2,7	2,5	2,4	2,2	9,8	2,5
Average number of dwellings per storey (3)	1,2	1,6	0,7	0,5	4,0	1,0
Average number of compartments per building (4)	4,3	4,4	5,5	5,8	20,0	5,0
Average liveable surface per compartment (m ²) (5)	17,3	17,5	19,8	21,6	76,2	19,0
Total gross built surface (m ²) (6)=(1)x(2)x(3)x(4)x(5)/0,65	82.539,8	64.916,9	32.087,0	13.568,8	193.112	48.278

Data collected from the municipal amortization and provision maps concerning public domain's assets – other construction and urban infrastructure – for 2009, 2010, 2011 and 2012 was used to compute the average annual costs with infrastructure (execution, maintenance and reinforcement). Its value - 705,2 €/m² – is approached by the quotient between land property transactions and the previously computed average gross built area (Câmara Municipal de Lagoa, 2009, 2010, 2011, 2012; INE, 2009, 2010, 2011, 2012) (Table 2).

Table 2. Average investment/m² in urban infrastructure in Lagoa Municipality.

Investments in urban infrastructures' execution, maintenance and reinforcement	2009	2010	2011	2012
Annual amortization of urban infrastructure (€)	26.399.063	31.439.028	36.570.644	41.767.542
Annual average investment (€)	34.044.069			
Annual average gross built surface (m ²)	48.278			
Infrastructure's cost (€/m ²)	705,2			

The buildable land price per m² according to market trade is, then, approached by the difference between the transaction value/m² and the average costs/m². These costs refer to both urban infrastructures and construction costs/m² (table 3)

Table 3. Price of land/m² in the municipality of Lagoa, according to market trade (in 2008, 2009, 2010 and 2011).

	2008	2009	2010	2011
Total value of town property trade (€) (1)	101.687.923	92.541.438	93.778.000	103.169.000
Gross built surface (m ²) (2)	82.539,8	64.916,9	32.087,0	13.568,8
Transaction value/m ² (€/m ²) (3)=(1)/(2)	1.232,0	1.425,5	2.922,6	7.603,4
Construction costs/m ² (4)	482,4			
Urban infrastructure costs/m ² (5)	705,2			
Price of buildable land/m ² of construction (€/m ²) (6)=(3)-(4)-(5)	44,4	237,9	1.735,0	6.415,8

Considering the contribution of each planning and management sub-operational unit and each type of use predicted in the Planning Unit 11 is proportional to its licensed gross built areas aimed at profitable uses, the average municipal buildable

land/m² based on town property trade is reckoned as the weighted sum of these different land prices/m².

The product between the price of buildable land/m² and respective net land use index/m² was computed after the identification of the gross built surface assigned to profitable uses (m²) in each area of Lagoa Municipality (where different plans and urban parameters are enforced). Then the percentage that each area represents in the average land price/m² each year is identified, in relation to the maximum licensed built area in the total build and buildable municipal areas. The sum of these parcels is, afterwards, extended to all the areas, thus the municipal land price reaches the value of 721,9 euros/m², on average, per year.

In order to estimate the betterment value/m², it is now necessary to compute the value of the buildable land/m² based on the application of the formula and parameters settled in the Real Estate Municipal Tax Code for each identified area in Lagoa Municipality. An average annual tributary patrimonial value of 56,1 euros/m² was found out (based on corresponding values for 2008, 2009, 2010 and 2011).

The betterment values/m² corresponding to each planning and management operational sub-unit and profitable touristic uses were assessed through the product between its licensed gross build surface and the difference between the annual land price/m² based on market trade (721,9 €/m²) and the homologous price that resulted from the application of the Real Estate Municipal Tax Code to Lagoa municipality (56,1 €/m²) (table 4).

It is finally computed the 20% tax for social purposes what, for this specific Development Plan, amounts to 12 764 718 € (table 4).

Table 4. Average betterment values and potential collectable values for all the planning and management operational sub-units and respective touristic uses in the Planning Unit 11 of Lagoa.

Touristic undertakings			Land surface (m ²)	Gross built surface (m ²) (1)	Surplus values (€) (2)=(1)*665,8	20% of surplus values (€) (3)=0,2x(2)
Planning and management operational sub-units		Classification				
Planning and management operational sub-unit East NDT	N.1	Lodging establishments (Hotels)	30.000	15.000	9.987.000	1.997.400
	N.2	Lodging establishments (Hotels, Serviced Flats ou Inns)	191.050	56.210	37.424.618	7.484.924
		Lodging complementary means (Holiday Villages)				
	Total (East NDT)			221.050	71.210	47.411.618
Planning and management operational sub-unit West NDT	P.1	Lodging establishments (Hotels)	10.000	5.000	3.329.000	665.800
	P.2	Lodging establishments (Hotels, Serviced Flats ou Inns)	66.754	19.650	13.082.970	2.616.594
		Lodging complementary means (Holiday Villages)				
	Total (West NDT)			76.754	24.650	16.411.970
Total values in the Planning Unit 11 (UP 11)			297.804	95.860	63.823.588	12.764.718

4 Conclusions, reflections and applicability

This article settles and justifies a methodology to compute 20% of betterment values resulting from plans and planning decisions (Rebelo, 2013) that municipalities are potentially able to recover from the application of the proposed non-negotiable development obligation. It is applied to the development Plan of The Planning Unit 11, in Lagoa (Portugal).

Through a clear identification of urban development funds' origins and applications, and an objective quantification of betterments that accrue from municipal planning decisions and urban operations, this new instrument strengthens the economic and financial sustainability of municipalities. It subsequently contributes to a more balanced distribution of urban development costs and benefits throughout the whole population, private stakeholders and decision makers within a certain municipality (Smolka and Amborski, 2003). It doesn't neither entangle a fiscal aggravation for most population, nor a rise in building costs (Smolka and Amborski, 2007; Hong, 1998). Besides, it ensures that betterments accrued by plans are used on behalf of the general social interest.

This proposed methodology and instrument can be applied to other municipalities and intervention areas of Municipal Master Plans, Urban Development Plans or Detail Plans, because it founds on inter-municipal comparable data and methodologies. And the funds thus collected can be used to promote the general social welfare.

This new instrument clearly fits the scope and goals of the new Portuguese Land Planning Act and complementary legislation, especially as far as the economic and financial sustainability of plans and urban interventions are concerned, promoting equity and social cohesion. Thus it will make a significant contribution to urban development and to municipal populations' welfare.

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Endnotes

- ¹ It corresponds to the sum of new buildings, and buildings' enlargement, changes and/or reconstruction.
- ² These costs are issued in the governmental orders that render applicable the article 39th of the Real Estate Municipal Tax Code enforced in 2008, 2009, 2010 and 2011 (Portaria nº 16-A/2008; Portaria nº 1545/2008; Portaria nº 1456/2009; and Portaria nº 1330/2010, respectively).