

Chapter 4

PLANNING TO FIGHT SPECULATION: OUTSTANDING INFLUENCES ON LAND RENT

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ABSTRACT

The core concern of this chapter consists in raising the problem of speculation and of greediness in converting agricultural into urban land in development processes, current in developed societies. Speculation springs as a counterpart of a succession of conceptual and operational flaws, inconsistencies and contradictions in juridical, planning and fiscal systems, which fuels the exacerbated interests of the agents straight or indirectly involved in property markets. A strategic assessment of this problem, under different perspectives, remits to the need to deal with the question of land rent and surplus-values, as they stand in the basis of its resolution. Within this scope, this article proposes and develops a methodology for the evaluation and computation of surplus values that is applied to the Portuguese land and real estate realities. Inferences and conclusions are drawn considering how legal, planning, fiscal, socio-economic and agents' behaviour perspectives shall deal with the surplus-values question, in order to efficiently solve the problem of speculation.

1. INTRODUCTION

Similarly to what currently happens in order developed countries, in Portugal have emerged an immoderate greediness (Talixa, 2008) in land changes from rural to urban uses, and in the intensification of land uses, favoured by: (i) inconsistencies in the legal urbanistic basis, and in its harmonization with planning tools, (ii) lack of clarification of planning assignments and unclear delimitation of the scopes of public administration and of planning

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technicians, (iii) conceptual and operational flaws in property taxation, (iv) excessive laxity in public administration, and (v) systematic unacquaintance with market characteristics and conditions by the planning system, as well as of the impacts administrative decisions exert on property prices. Consequences have turned up at the urban level, namely as far as the following issues are concerned: (i) municipal policies and planning decisions haven't succeeded in reaching a sustained balance between public and private land interests (land hasn't accomplished properly its social function, respecting the private property rights, and planning remains apart from real economics performance, what has translated in a lack of stimulus to private initiatives aimed at planning goals), (ii) city centres have been progressively shrinking as a counterpart of the sprawl of the urban peripheries and, finally, (iii) the lack of control over land and real estate prices has been nourishing speculative processes.

Within this scope, the main goal of the research reported in this article consists in trying to respond effectively and efficiently to the problem of speculation, taking into account the different perspectives of the problem, their articulation, and respective territorial impacts. A strategic analysis of the environment of the problem is pursued, considering its legal, socio-economic, fiscal, planning and urbanistic aspects, as well as the interests of the different involved agents.

A better control over the speculation problem, and over the exacerbated development processes will strengthen the operation of planning organisms in pursuing their strategic goals in what refers, mainly, to: (i) provision of land for different functional uses at acceptable prices (respecting urban property rights), (ii) enhancement of private initiatives of promoters, builders and sellers, and (iii) monitoring and control of surplus-values that accrue from administrative decisions, assuring they are applied on behalf of population's interests.

This article (i) begins by a brief analysis and critical assessment of the relations among the Portuguese Constitution, the land use law, the base law of the territorial ordinance and urbanism policy, and the juridical regime of territorial management tools, (ii) then the concepts of land rent and surplus-values and respective underlying variables are exposed, (iii) the behaviour of the different agents involved in property markets (including public administration bodies) is analysed, (iv) the consequences of different kinds of public interventions on property values are assessed in terms of the surplus-values they engender, (v) a model (made up by a set of tools) is proposed for the computation of land rent and surplus-values (applied to the office market in Oporto city) and, finally (vi) some critical reflections are enlarged upon the way how the different analysed perspectives shall face the surplus-values question, and what tools should be used and how in order to solve the problem of galloping property speculation.

2. BIBLIOGRAPHIC REVIEW

In this section is pursued a brief analysis of: (i) the concepts of land rent and surplus-values, and the variables that condition them, (ii) the relation among planning goals and related legislation (Constitution, urbanistic and fiscal legislation) (iii) the consequences of public interventions on property values (in terms of engendered surplus-values), and (iv) the behaviours of agents in property markets. This analysis allows the identification of flaws,

incoherences and contradictions in the different parties that condition property prices and surplus-values. These explain the lack of control over speculation currently exhibited by public administration.

2.1. Urban Land Rent and Respective Underlying Variables

Land and real estate prices exhibit an outstanding cause-and-effect relation (Clark, 1995; Granelle, 1970; LeFeber, 1958; Thoman et al., 1968). The cost of land is a component of real estate prices, mainly due to (i) the heterogeneous characteristics of the different plots of land, (ii) competition for land uses, (iii) planning regulations, and (iv) location choices of firms and families (Dunn, 1954; LaFountain, 2005; Needham, 1981). Besides, retention strategies often adopted by landowners, decrease land supply and, as a result, generate absolute and monopoly rents that add to real estate production costs (Harvey, 1985). On the other hand, whenever competition for land uses turn up, the expected prices of real estate assets influence the prices of land plots (George, 1879; Ricardo, 1817; Smith, 1843).

According to these interconnections, land costs can be split into two parcels: (i) the transference cost that corresponds to the capitalized income that results from land's productive use, and (ii) the economic rent. Whereas the transference cost is a part of real estate costs (and, thus, it enters into their prices), the economic rent is given by the difference between the price of land and its transference cost (Chacholíades, 1986). Economic land rent includes, thus, a surplus rent (in relation to the transference cost), and an additional profit margin, and in practical terms it is very difficult the objective distinction between rent and profit. That is why planning should rule land profit generation, taking into account the social function of land, on the one hand, and the need to stimulate the initiatives and investments performed by promoters, builders and sellers, on the other (Pardal, 2006a; Rebelo, 2009).

Land price formation is strictly linked to its territorialisation structure, and to the land use policy pursued by central and local authorities (Pardal, 2006a). The discipline of inter-territorial relations and the respect by private property rights is established within this framework (Pardal, 2004, 2006a). Land values are modelled by various factors such as: (i) the rights of private property, (ii) taxation over property assets, (iii) land uses allowed by territorial plans, (iv) urban land production rules, (v) real estate promotion by public and private sectors, (vi) renting laws, (vii) credit conditions for real estate acquisition, (viii) legislation to support property acquisition, and (ix) the proper land use structure.

The main factors that explain real estate price formation, by its turn, relate to: land, development, technical building, management, administrative and marketing costs, financial charges, and property taxes. These factors refer specifically to (Pardal, 2006a): (i) land gross residual value (mastered by demand), (ii) land geomorphologic characteristics, (iii) woody or agricultural land value (regulated by exploration rents, but often modelled by psychological factors), (iv) plot's location in relation to the main centres and subcentres, (v) plot's dimension, (vi) property division (that usually involves a rise in land prices), (vii) licensed use (that depends on a political or administrative decision) (viii) changes in land use and/or in intensity of use (the administrative decision to change agricultural into urban land, or to alter the urban parameters potentially engender surplus-values), (ix) indirect surplus-values (that result from infrastructures, equipments, public services or other undertakings), (x) demand

(split into useful and speculative demand), (xi) land and real estate taxation, and (xii) private investment in building and in other improvements.

2.2. Surplus-Values and Respective Underlying Variables

The accrued value of property (usually named surplus-values) may be faced under the juridical, the urbanistic and the urban economics' perspective. From the juridical point of view, surplus-values are assimilated to capital gains, in order to be included in total income for fiscal taxation purposes. In urbanistic terms, surplus-values refer to property's increased worth that accrues from public works or from planning decisions, such as: (i) changes from agricultural to urban land uses, (ii) definition of urban perimeters, (iii) division of land property, (iv) expansion of the building capabilities, and/or (v) expansion of autonomous land plots (Pardal et al., 1996). According to this point of view, surplus values can be subdivided into: pure surplus values (that translate the increase in property worth as a result of a strictly administrative decision), and non-pure surplus-values (that correspond to land increased worth that result from public works).

Despite in the scope of law, surplus-values, by definition, should belong to public administration, both overprofits and land use changes or intensification that result from urbanistic undertakings will impact on the evolution of its value. Both these parcels enter in the urban economics understanding of surplus-values (this concept parallels the concept of economic land rent). In practical terms, the increase in property worth has two component parts: (i) one depends on its territorial-based value (plot's location, dimension and authorized use), results from social and territorial dynamics, and is independent of landowner's investment or worth and of market behaviour, thus it can be controlled by territorial plans and other land policy tools, and (ii) the other proceeds from trade profit goals, and from market current operation, as well as from improvements in property undertaken by the owner or leaseholder (Pardal et al., 1996). This implies that, besides the difficult determination of urbanistic surplus-values (due to practical hindrances to compute the effects of certain decisions), it is almost impossible their dissociation from profits. This consequently shapes the effects of property taxation on urban economics, namely through the subsequent behaviours and initiatives of private agents (Correia, 1993; Lichfield and Darin-Drabkin, 1980; Smolka and Amborski, 2003). As surplus-values are, by definition, publicly-due, the taxation system shall ensure that, at least part of its value should be recovered by the public sector whenever they turn up in private-owned property¹ (Rebelo, 2003).

3. IDENTIFICATION OF FLAWS, INCONSISTENCIES AND CONTRADICTIONS IN JURIDICAL, PLANNING AND FISCAL SYSTEMS

According to the Portuguese Republican Constitution – articles 62nd and 65th – land and real estate urban property assume an outstanding social dimension (Monteiro, 2008). Thus it should simultaneously fulfil specific public interests (namely public health, security and

¹ In the research reported in this article is adopted the concept of surplus-values used by urban economics.

buildings' aesthetics), and the general collective interests. But, in spite of its crucial importance for planning purposes, the urbanistic legislation doesn't properly assess the urban property question (Monteiro, 2008). Indeed, the land use law (Decree-Law n° 794/76, of 5th November) only rules forms of land acquisition and sale by public administration. The base law of the policy for territorial ordinance and urbanism (Law n° 48/98, of 11th August, altered by the Law n° 54/2007, of 31st August), by its turn, remits the conformity between planning purposes and the content of urban property rights, to planning tools (namely municipal master plans) through definition of land use regimes, but without rendering them compatible with the civil property regime. The Portuguese urbanistic legislation is unacquainted with surplus-values, and palms the behaviour of real estate markets and their regulation. Besides, the current land use law, and even the operation of the territorial planning system haven't managed to be efficient neither to assure the social function of land nor to fight speculation. Despite the existence of some studies and partial territorial databases, a balanced land-use classification system (that allows the proper explanation of big differentials in values), hasn't yet turned up. Only recently some steps were undertaken in order to render operational the cadastral structure for the whole Portuguese territory (Campos, 2009; Pardal, 2006b).

The state and municipal authorities are the entities theoretically responsible for the control over surplus-values, either through fiscal devices, or through a suitable land use policy, and respective urbanistic management (Correia, 1993). If the public administration is in charge of the production of development land, the sale in public auction of these urbanised land plots allows the retention of surplus-values that accrue from their own decisions (Gwin et al., 2005; Hong, 1998; Peto, 1997; R.I.C.S., 1996). This favours their responsibilities to dictate the rules of urban growth, and to balance the operation of property markets, thus preventing conflicts with other involved agents (Pardal et al., 1996). But if the production of urban land is granted to private agents, the surplus-values assemble with the costs of infrastructures, and with profits and losses of promoters, builders and sellers. Under these circumstances, the public administration will only manage to levy part of surplus-values, and only indefinitely and indirectly, because taxation settles on presumed values. Thus public administration loses a basic policy tool to regulate land plots' uses and urban growth (Correia and Silva, 1987; Pardal, 2006a).

In Portugal, along the last four decades, almost nothing was produced about surplus-values generation, parametrization, distribution and consequences on land and real estate prices, within the scope of the current doctrine, tools and administrative proceedings of planning and urbanism (Pardal, 2006a). According to Pardal (2006a), plans are generally characterised as stiky documents, hard to make up, possess weak contents, lack urbanistic merit, and don't take economic factors under consideration. The municipal master plans (P. D. M.'s) as well as the territorial plans neither refer to, nor make any analysis of (i) property markets and their spaces of intervention, (ii) the factors that condition and explain land and real estate price formation, (iii) supply and demand segmentation², and (iv) how their contents may affect real estate markets. Besides, the planning system has stated land use classifications that are marginal to the logic of market operation (Pardal, 2006a). Indeed it simply considers the existent uses as settled, instead of pursuing strategic proactive guidelines in land

² The planning system doesn't properly assess land market segmentation because it ignores that whereas the useful demand searches for spaces to fulfil certain social functions, the speculative demand invests in property independently of social concerns (Correia, 1993; Pardal, 2006b).

allocation. The entities in charge to take decisions concerning land use classifications and assignments possess great power (Pardal, 2006a). As planning lacks the economic clarification of segments that should structure real estate markets, when it settles land uses it assigns surplus-values to some plots and denies them to others, without any control. The Portuguese legislation simply ignores the economic and financial consequences of these procedures, what engenders uncertainty among property agents (Pardal, 2006a). This way, expectations concerning surplus-values appropriation remain uncontrolled and aside from the territorial ordinance principles (Pardal, 2006a), and market agents don't willingly conform to the contents of plans (Pardal, 2004, 2006a).

Despite planning agents are aware of the arbitrary power they hold on the market, they don't assume the responsibility to analyse the effects of their decisions on property values, due to legal and operational restrictions settled on their working conditions (Pardal, 2006a): (i) the spheres of influence of central and local administration are not duly delimited; and (ii) both these competencies are modelled by technical bounds or compulsory consultation statements.

In addition, Portugal has also increasingly been undergoing privatization processes of public services (Pardal, 2006a). Despite these were initially grounded on neo-liberal principles, they nowadays expand under cover of the inertia, lack of responsibility and emptying of public administration services. This entangles a galloping loss in state and autarchic powers concerning the management of the public interest. They consequently loose the ability to protect citizens from business-related firms with almost monopolist characteristics (Pardal, 2003, 2004).

The production, allocation and prices of urban land are shaped by rules, opportunities and expectations concerning their expected uses (Aydalot, 1985). Thus, they depend on a complex set of inter-related decisions taken by different economic agents: landowners, promoters/developers/builders, real estate mediators, final buyers or tenants, credit institutions and public authorities. But considering the main imperfections of property markets (few participants in transactions, lack of transparency, and monopolistic features), part of the surplus values engendered by development processes nourish speculative behaviours, escape authorities, and fail to be used on behalf of society in general.

When pursuing their profit goals, landowners try to appropriate as much surplus-values as they can, and they even try to reach a slice of promoters' profit margin, what increases the risk the latter will be faced with (Pardal et al., 1996). If a market discipline able to stress property's useful sense and social value doesn't exist, landowners will pursue passive retention strategies, and other appropriation forms marginal to planning-settled uses, what frequently leads to property emptiness, ruin and dereliction. This land abandonment maximises its speculative valorization, and provides prompt availability of property for opportunity trade (Pardal, 2006a).

Promoters/builders/sellers, by their turn, try to increase their profit levels not only through their urban development activities, but also through inclusion of surplus-values in their own profits, often escaping the payment of the respective tax. In order to maximize the surplus-values within their reach, they often exert pressures over public administration in order to (i) change plans, regulations, building permits or licences to more profitable uses, or (ii) intensify land uses (especially in central urban areas, where the profit margins they may keep from surplus-values are already squashed, because they were already appropriated by a series of mediators and land speculators in search for a quick profit). These behaviours are tolerated in the scope of current legislation and planning practices (Pardal, 2006a).

Real estate agents (including valuers, consultants and other real estate professionals) connect buyers and sellers, are an important source of information concerning real estate location, characteristics, and availability, and thus encourage property markets' transactions. They try to hold part of the surplus-values, especially through percentage commissions on transactions (Rebelo, 2003).

Finally, the role of local authorities in land use management and control mainly expresses through: (i) provision of real estate assets (settled on different public programs), (ii) zoning regulations, (iii) laws, (iv) taxes, (v) permits for land use changes, and (vi) decisions on investments in infrastructures, equipments and public spaces. The state, autarchies and the proper credit institutions also try, through resource to different processes, to take a share on surplus-values, either through tax collection, or through negotiations involved in development processes (Lichfield and Darin-Drabkin, 1980; Pardal et al., 1996; Smolka and Amborski, 2003;). Usually banks and insurance companies are able to reach higher profit levels through their lending activities, thus they leverage surplus-values and property inflation. They further turn out as speculators on pure surplus-values, namely through consideration of property ancient and/or vacant assets as fixed on years' closing accounts.

But the interests drawn and involved in territorial planning don't figure explicitly in plans (Pardal, 2006a). And these interests end up by translating into an obscure and tactical web of administrative influences, conflicts and power games that underlie reasonings, and often lead to urban development undertakings marginal to plans.

The tax on land accrued worth (currently named surplus-values tax) falls upon profits, urbanistic surplus-values and other increases in property worth, engendered during a period of time prior to transaction (Pardal et al., 1996). This tax is levied under the following tributary facts (Pardal et al., 1996): (i) public administration decisions concerning planning and urbanism (changes in land uses and/or in construction indexes), (ii) framework benefits that result from infrastructures, equipments and public spaces, (iii) market conditions, and (iv) buildings' improvements. In the United States of America, Canada and Latin American countries different surplus-values appropriation tools are used, that range from conventional taxes and urbanization rates (with varying tributary basis and percentages, according to countries), to different urban policy ruling tools, with diverse characteristics (Smolka and Amborski, 2003). In Portugal, in the scope of the law of local finances (Law n° 2/2007, of 15th January), the revenues that accrue from surplus-values, in spite of being collected by the state, revert on behalf of municipalities.

Despite the successive fiscal reforms the Portuguese legislation have been going through, the evolution in surplus-values taxation hasn't been remarkable. In the sequence of the eighties' fiscal reform, a unique income-tax was created, and the tax on real estate property begun to fall upon the proper property, independently of the income it generated (Pardal, 2006a). However, surplus-values are still included in assessable income, and collected through the income-tax³ (Pardal et al., 1996). Despite the simplification in fiscal proceedings, this statement of surplus-values isn't entirely correct, because the accrued worth is not a capital yield, but the result of an administrative and/or a private decision (Pardal et al., 1996). The main change in surplus-values taxation took place at the level of the municipal tax on real estate I. M. I. (Decree-Law n° 287/2003, of 12th November): what enters in the computation of surplus-values is the property values appraised according to the I. M. I. parameters. Despite

³ Income-tax of singular people (I. R. S.) and income-tax of collective people (I. R. C.)

the appraisal parameters are clear and objective, this structural change had deep repercussions on the private property status because the identification and distinction of the increased values that proceed from municipal interventions, and those that result from the initiative of promoters, builders and sellers is neither simple nor clear (Pardal et al., 1996). Besides, the philosophy of the current municipal tax on real estate raises a twofold concern (Pardal, 2006a): (i) the values of the assessment tax resemble a rental payment (what foreshadows the feudalization of the real estate property regime), and (ii) the landlords are subject to a double taxation: of the municipal tax on real estate, and of the income-tax. These mismatches and inconsistencies between the fiscal and the urbanistic legislation raise disfunctionalities in certain markets (as is the case of the renting market), create hindrances and strongly shape the prosecution of the goals of a balanced land use policy.

Additionally, the I. M. I. punishes unfairly the investment in property patrimonial valorization (Pardal, 2006a), in contrast to what generally occurs with the majority of economic activities, where firms' fixed capital assets are not subject to any fiscal burden. This fiscal precept has an underlying contradiction: on the one hand, the state and municipalities pay subsidies to shield architectural and landscape patrimony, finance buildings recovery in historical areas, and assign low-interest loans to face the woody and agricultural abandonment problem, and on the other, strongly punish the private investment in real estate building (the proper investment in recovery works and buildings implies an aggravation in the I. M. I. tax).

In Portugal the state has faced many hindrances to recover surplus-values, especially as far as pure surplus-values are concerned. However, it has managed to tax non-pure surplus-values through the municipal tax on development, aimed at sharing public administration expenses on infrastructures and equipments: it is collected by municipalities to private promoters when development licences are issued (Rebelo, 2003). The income from the municipal tax on development is purportedly used to finance infrastructures, equipments and public services in the areas where it is collected. But the law allows its application in other kinds of equipments or public services, or in the pursuit of different goals, even if on a different place. The tax on local development, thus, exerts different (and sometimes, contradictory) effects that result from confronting income goals (redistribution or equity) and economic incentives. This engenders a vicious circle, with clear implications for planning and urbanisation: on the one side, urban expansion is induced by municipalities as means to get additional revenues, (with clear implications for control over urban sprawl), and on the other, surplus-values generation and distribution unchain perverse effects, considering the current framework and operation of the Portuguese planning and urbanistic system.

The current fiscal reform settles on the English system, where the tributary measurable unit is called "rateable value to the pound, that points out the contribution each unit value of property should pay. In this system, surplus-values taxation is perfectly under control (Rebelo, 2003). Despite the Portuguese financial management information system already disposes of concrete indicators concerning matricial prices, use, tipology, location, age, and state of preservation (the latter, by its turn, defined as a function of building's age, and dependent on repairs carried out), it would be valuable the existence of a complementary database with data that allowed the on-going monitoring and evaluation of real or potential property market prices, for the different kinds of land functional uses (according to respective location and characteristics). The conjugation of data from these both databases should allow, at each moment, the evaluation and quantification of respective surplus-values.

The identified flaws, inconsistencies and contradictions among the different fields that interfere with speculation and with surplus-values' formation (legislative, planning and urbanism, interests of agents in property markets, taxation, and social and economic characteristics) clearly draws attention to the outstanding importance of the surplus-values question. It is fundamental that this question is pulled into the political debate, and that the conceptual, theoretical and empirical knowledge is disseminated at planning/urbanism, social/economic, and legal levels as a crucial means to solve the speculation problem (Pardal, 2006a).

4. METHODOLOGY FOR THE COMPUTATION OF ECONOMIC RENTS AND OF SURPLUS VALUES

The powers detained by planning and local authorities to engender surplus-values and minus-values draw attention to the urgent need to frame the political and administrative act of land use changes. Proceedings should be settled in order to make explicit the amounts accrued or withdrawn from properties' venal values (Pardal, 2006a) as a result of: (i) land use classifications, (ii) construction parameters or (iii) other regulation factors that proceed from territorial plans or other acts that influence property rights (Pardal, 2004, 2006b). This clarification of procedures must be pursued, otherwise the powers to change land uses will be disputed by political, technical and administrative requests of the different entities that interfere in ruling and licensing processes of land and building uses.

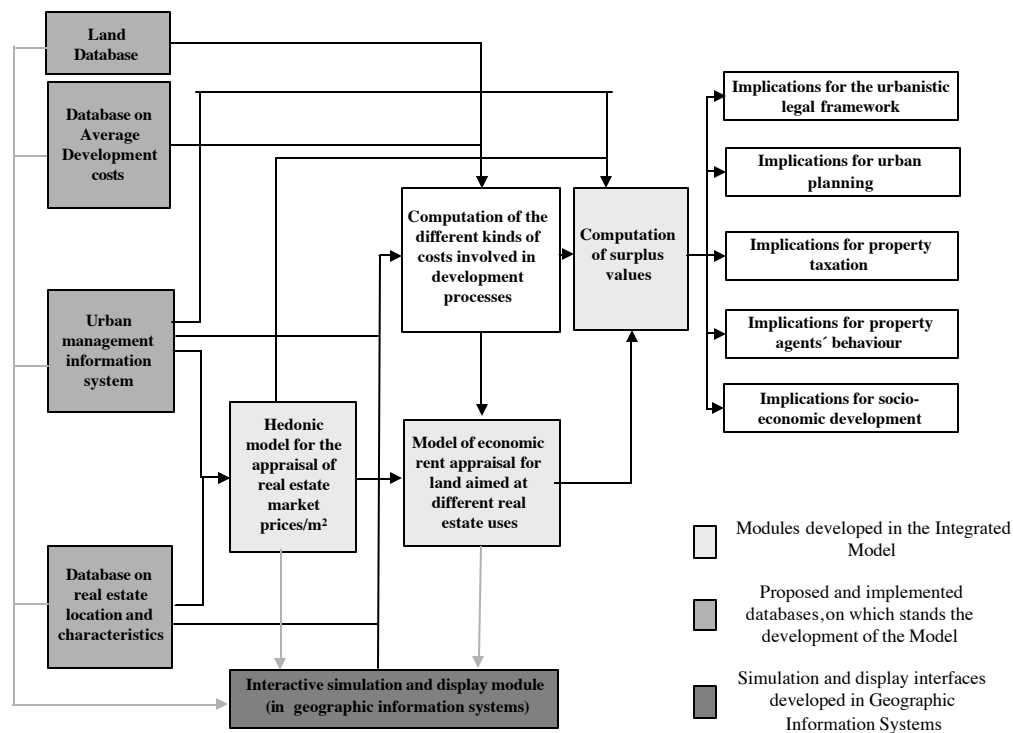


Figure 1. Integrated and interactive model to support municipal decisions concerning property markets

In order to respond to this goal, this article proposes a methodology for the appraisal and computation of surplus-values that fit locals, uses and intensities of use. This theoretical and empirical knowledge is expected to support subsequent interventions on land and real estate markets from (i) the urbanistic legal framework, (ii) urban planning, (iii) property taxation, (iv) property agents' behaviour, and (v) socio-economic development, so that these parties can better deal with the speculation problem. This methodology further allows the monitoring of the evolution of the variables that underlie property prices and surplus-values, and a more efficient control over their distribution (Figure 1). It is applied, as a case study, to the office market in Oporto city (Portugal).

A management information system (with on-going monitoring functionalities) was first developed. Subsequently an integrated and interactive model was implemented in order to compute surplus-values of land aimed at office uses, based on a hedonic model of market prices, on average development costs, and on tributary patrimonial values (Rebelo, 2009).

4.1. Development of a Management Information System

The main office areas in Oporto city are located in the Boavista district, the Constituição/Marquês district and the old downtown centre (characterised by a remarkable stock of heritage buildings) (Figure 2).

A management information system was developed and implemented for Oporto city. It is made of databases on (i) land parcels, (ii) urban indicators, (iii) average development costs, and (iv), and real estate location and characteristics (Rebelo, 2009).

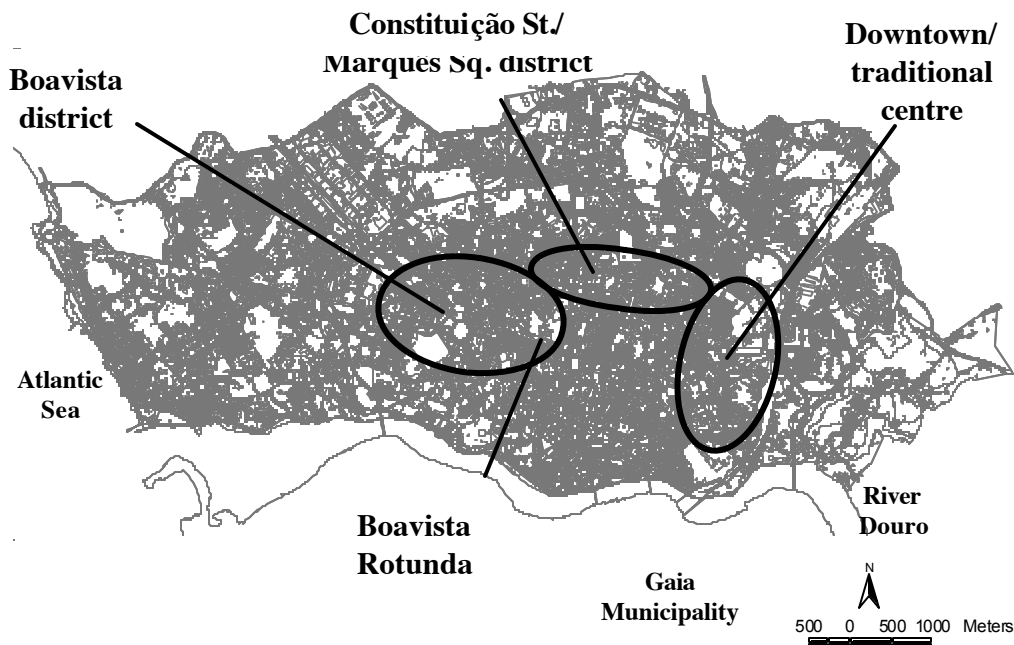


Figure 2. Main office areas in Oporto city

The database on land parcels supports the monitoring of most characteristics of the plots, as well as of their uses (enabled by territorial plans and other tools of land use policy). The included variables are: (i) plot's dimension, (ii) geo-morphological characteristics, (iii) absolute and relative location (in relation to the main centre and sub-centres); (iv) current or anticipated property division, (v) licensed use, (vi) taxes (real or anticipated), and (vii) surplus-values that result from infrastructures, equipments, public services and other undertakings (indirect surplus values).

The database on urban indicators points out the variables that exert influence on offices' demand, supply and prices, some proceeding from market operation, and others under the control of local authorities (Rebelo, 2009). These variables refer to: (i) spatial/geo-referenced location of offices, (ii) planning regulations (including zoning regulations and land use coefficients), (iii) location indexes of different kinds of office activities (that show relative spatial concentration in relation to the overall territory), (iv) weighted distance to urban centres and sub-centres, (v) inertia exhibited by offices to remain in the same location (vi) public investments in communications and transports, culture, sports and leisure time; public health utilities, environment; education; housing; economic development and tourism; civil protection; social action and urban (re)qualification, (vii) number or density of inhabitants in each block, and (viii) date.

The database on average development costs include: (i) land and land-related costs, (ii) development costs, (iii) building costs, (iv) management, administrative and marketing costs, (v) financial charges, and (vi) property taxes: The costs of land plots by square meter of building area correspond to the economic capitalized return from land use (it reflects its transference costs). They are considered to match the prices of the housing construction plots sold in public auction (that approach the prices of land for social uses). The computation of land costs for office uses ponder those prices according to the average percentage that office prices represent over them. Land acquisition costs also include other parcels, which are expressed as a percentage of the land acquisition cost/m²: (i) transfer tax (10%), (ii) stamp duty (0.4%), (iii) property registration costs (0.5%), (iv) notarized costs (0.5%) and (v) lawyer honoraries (0.5%). The urbanization costs represent the costs of land infrastructures and participation in public investments. They are computed according to the municipal tax for urban infrastructures. The building costs include: (i) construction costs properly so-called (that approach the selling prices/m² of common housing, annually published as a decree in the government diary), (ii) costs with equipments (namely heating systems, lifts and special foundations), and (iii) building honoraries. This category of costs also include different contingent costs (that generally go up to 5% of the total costs), as well as the building inflation. It was assumed in this research that management, administrative and marketing costs amounted to 0.8% of total construction costs/m². It was additionally taken a 20% added value rate upon those costs. In what concerns the financial costs, it was considered a 6.2% rate of annual capital cost, and 50% of borrowed capital for land acquisition purposes, and 50% of borrowed capital for commercialization purposes (commercialization costs were assumed to represent 0.5% of total building costs). Finally the municipal tax on property was applied, taking office uses into consideration.

The database on real estate location and characteristics assembles a set of indicators concerning the characteristics, location, morphology and typology of buildings and office units, and respective kinds of uses.

4.2. Methodology for Surplus Values Computation

The computation of surplus values of land for office uses is undertaken in two steps: first is computed the economic land rent, and then are reckoned the surplus-values.

The economic land rent/m² is given by the difference, per square meter, between the expected income and a set of anticipated land, development, technical building, management, administrative and marketing, and financial costs, property taxes and a normal profit rate (expressed as a multiple of those overall costs) (Rebelo, 2003, 2009). The offices' selling price/m² according to respective functional use, characteristics and location can be anticipated by a hedonic model that expresses it as a function of the indicators systematized in the urban management information system⁴ (Rebelo, 2009). Each building site is assigned a certain licensed area or volume, according to planning regulations and restrictions. The total expected income is computed as 60% of the product among the licensed building area (according to the land use coefficient or index), and the office selling price/m² anticipated by the hedonic model⁵.

The surplus-values of land for office uses are, then, computed by the difference between the land market values and respective tributary patrimonial values (computed according to the municipal tax on property⁶) (Rebelo, 2009). The land market values are reckoned by the sum of the land rent (that corresponds to the economic return on land use, previously computed) with the economic land rent. The tributary patrimonial-value of building land is given by the sum of the value of the building implantation surface with the value of land adjacent to construction (articles 38th, 40th, 41st, 42nd and 45th). The value of the implantation surface of buildings varies between 15% and 45% of the building costs (this percentage already considers location characteristics). The tributary patrimonial-value of urban buildings targeted to housing, trade, industry and services is computed as the product among the property's territorial-based value, the gross construction area plus the area that exceeds the implantation one; the affectation coefficient; the location coefficient; the comfort and quality coefficient; and the ancientness coefficient. The affectation coefficient (article 41st) depends on the kind of use: trade, services, housing, social housing, warehouses and industrial activities, and parking. The location coefficient (article 42nd) considers accessibilities, nearness to social equipments, public transportation services, and location in expensive real estate areas⁷. The comfort and quality coefficient (article 43rd) of urban property for trade, industry and services purposes is positively weighted by the location in trade centres or in building offices, by the existence of central heating, by the building quality and the existence of lifts or rolling stairs, and negatively weighted by the inexistence of sanitary installations, water and electricity nets, sewerage system, paved streets, lifts in buildings with more than three floors and low

⁴ This model provides on-going monitoring functionalities, as it can fit to updated information introduced in the urban management information system.

⁵ In the Oporto office areas, it was assumed that 60% of each square meter is devoted to office uses, and the remaining 40% to other uses (including public spaces). The total expected income was, thus, empirically computed as 60% of the product between the average licensed number of floors, considering an average height of 2.7 meters (according to the general regulation of urban edifications R.G.E.U.) and the selling price/m² anticipated by the hedonic model.

⁶ The patrimonial value is computed according to the official valuation code (DL nº 287/2003) that settles the parameters for the computation of real estate reasonable prices/m², based on the application of socially-oriented land policy principles (Pardal, 2006b).

⁷ This judgement may be rather subjective.

maintenance conditions. The ancientness coefficient (article 44th) expresses the influence that building age exerts on prices.

According to the proposed methodology, and considering that the developed hedonic model (that accounts for 67.8% of explained variance) expresses office prices/m² as a function of variables with urban content, it becomes possible the dissociation between the surplus values (that accrue from variables mainly controlled by municipalities), and the profits (that result from variables mainly regulated by the market⁸). The taxation of these two components can, therefore, assume different rates, so that surplus-values are recovered without discouraging private's investments and initiatives (Arnott and Petrova, 2006; Rebelo, 2009).

The interactive model developed in this paper can be redefined through inclusion of new and updated information. Besides, its simulation and display interfaces allows: (i) the on-going monitoring and control of factors that influence property prices, (ii) computation and cartographic display of land economic rent and surplus-values patterns, (iii) analysis of changes in surplus-values that result from spatial and economic variations in planning variables, and (iv) simulation of alternative scenarios to support local authorities' decisions (namely concerning the control over speculation). Due to its structure and flexibility, this model easily adjusts to other urban realities, and to other property markets.

4.3. Results

The developed hedonic model expresses offices selling prices/m² as a function of different urbanistic variables (Rebelo, 2009): (i) offices' spatial location, (ii) urban planning regulations (zoning restrictions and land use coefficients), (iii) location indexes of different office activities, (iv) weighted distance to the most recent business centre (Boavista Rotunda), (v) temporal inertia of office activities, (vi) different kinds of public investments, (vii) number of people working in the upper tertiary sector, and (viii) date. Next table presents an excerpt from the database on the different kinds of costs involved in office development processes in Oporto city⁹ (Table 1):

The outputs of the integrated and interactive model, that refer to the economic land rent and to the surplus-values of land aimed at office uses, according to respective characteristics and location, are outlined in next table (Table 2):

Using the module of cartographic visualization leads to the distribution of surplus values presented in Figure 3:

4.4. Discussion of Results

Considering the flaws, inconsistencies and contradictions in juridical, planning and fiscal systems, the developed management information system and the proposed methodology for the computation of surplus-values, control over speculation processes may be performed through: (i) the harmonization between the urbanistic legislation and the base law of the

⁸ Considering respective percentage in total land economic rent.

⁹ The collected information refers to year 2000.

policy of territorial ordinance and urbanism, the juridical regime of territorial management tools, and the land use law, (ii) appropriate planning policies and tools, (iii) adjustments in taxation procedures, (iv) changes in behaviours of the agents involved in property markets, and (v) a better coordination between planning interventions and social and economic development.

In order to ensure justice and equity principles, and control the economic greediness in property trade (Pardal, 2006a), it is deeply important that the urbanistic legislation, and particularly the land use law manage to (Monteiro, 2008): (i) render compatible the content of the urban property law with the territorial management tools, (ii) adjust the property structure and its object to the needs of urban life and to land social uses (namely through the reinforcement of the paradigm of horizontal property by contraposition to the paradigm of vertical property, and through the progressive independence between the right to build from the content of the private property law, thus harmonising public urban governance with the private appropriation of city spaces). The Portuguese land use law – that is currently undergoing a revision process – must be able to respond to two main outstanding goals: (i) control of urban sprawl and associated speculation, and (ii) contribute to solve the problem of monitoring, control and recovery of surplus-values engendered by planning interventions. In this sense, the proper identification and treatment of the surplus-values problem is crucial, through the jointed application of (Pardal, 2006a, Rebelo, 2009): (i) the market property valuation (made up by the appraisal techniques currently used by real estate valuers), and (ii) the official valuation code (that supports the critical comparison of market values with reasonable values in the scope of a land use policy that attends to property social function) (Correia, 1993; Pardal, 2006a). A better awareness of the variables underlying land and real estate prices, according to respective characteristics and location, will render easy the adjustment of the urban property rights to land social interest and to territorial options. In this sense, the proposed methodology identifies the contributions for land and real estate values that proceed from planning decisions and those that accrue from the private initiative.

At the planning level, the control over surplus-values requires the working up of transparent plans, able to inspire confidence concerning the territorial uses, changes in uses or in intensities of use that they propose (Pardal, 2006a).

An appropriate land use policy, founded on an updated land use law, and on an urbanistic legislation more suited to current social, economic and urban local characteristics, should allow a better control over the factors underlying land prices and speculative values, taking into account the capitalisation range of land rent supported by exploration according to territorial planning assigned uses, and the exceeding market values (Pardal, 2006a). It should, additionally, be able to place some restrictions on the urban development greediness, in order to warrant (i) control over land provision and respective price levels, and (ii) the socially-guided land vocation, shielding the rights and interests of private people and firms in view of the interest of great economic potentates, (iii) the rights of urban property, so as to balance public and private interests, (iv) the control over urban sprawl, (v) rehabilitation concerns, and (vi) the reinforcement of the renting market.

Table 1. Different kinds of costs/m² involved in office development processes in land acquisition and office building, according to their location in Oporto city (excerpt from the database)

Unit: Euros																			
Adress	Zone in Oporto city	Land acquisition costs/m ²							Building costs/m ²			Management, administrative and marketing costs/m ²	Financial costs/m ²			Municipal tax on property/m ²	Total costs/m ²		
		Land cost/m ² of office buildings	Municipal transfer tax	Stamp duty	Property registration costs	Notarized costs	Lawyer honoraries (0,5%)	VAT on lawyer honoraries	Development costs	Total land costs/m ²	Average office building costs (ans specialised works)		Average costs of building garages/m ² of office buildings	Total office building costs/m ²	Financial costs of land acquisition/m ²			Financial costs of commercialization/m ²	Total financial costs/m ²
646 RUA PROF CORREIA ARAUJO R	Antas	211,5	21,2	0,8	1,1	1,1	1,1	0,2	31,5	268,4	415,0	43,8	458,8	3,7	8,3	0,1	8,4	0,770	740,0
94 ALAMEDA ECA QUEIROS AL	Antas	211,5	21,2	0,8	1,1	1,1	1,1	0,2	31,5	268,4	415,0	43,8	458,8	3,7	8,3	0,1	8,4	0,770	740,0
130 ALAMEDA ECA QUEIROS AL	Antas	211,5	21,2	0,8	1,1	1,1	1,1	0,2	31,5	268,4	415,0	43,8	458,8	3,7	8,3	0,1	8,4	0,770	740,0
194 ALAMEDA ECA QUEIROS AL	Antas	211,5	21,2	0,8	1,1	1,1	1,1	0,2	31,5	268,4	415,0	43,8	458,8	3,7	8,3	0,1	8,4	0,770	740,0
256 ALAMEDA ECA QUEIROS AL	Antas	211,5	21,2	0,8	1,1	1,1	1,1	0,2	31,5	268,4	415,0	43,8	458,8	3,7	8,3	0,1	8,4	0,770	740,0
191 PRACA PEDRA VERDE PC	Aldoar/Antunes Guimarães/Vilarinho	205,0	20,5	0,8	1,0	1,0	1,0	0,2	31,5	261,1	415,0	43,8	458,8	3,7	8,1	0,1	8,2	0,770	732,5
216 PRACA PEDRA VERDE PC	Aldoar/Antunes Guimarães/Vilarinho	205,0	20,5	0,8	1,0	1,0	1,0	0,2	31,5	261,1	415,0	43,8	458,8	3,7	8,1	0,1	8,2	0,770	732,5
250 RUA SOEIRO MENDES R	Aldoar/Antunes Guimarães/Vilarinho	205,0	20,5	0,8	1,0	1,0	1,0	0,2	31,5	261,1	415,0	43,8	458,8	3,7	8,1	0,1	8,2	0,770	732,5
305 PRACA PEDRA VERDE PC	Aldoar/Antunes Guimarães/Vilarinho	205,0	20,5	0,8	1,0	1,0	1,0	0,2	31,5	261,1	415,0	43,8	458,8	3,7	8,1	0,1	8,2	0,770	732,5
280 RUA EUGENIO CASTRO R	Boavista/Rotunda	290,0	29,0	1,2	1,5	1,5	1,5	0,2	31,5	356,3	415,0	43,8	458,8	3,7	11,0	0,1	11,1	0,770	830,6
300 RUA EUGENIO CASTRO R	Boavista/Rotunda	290,0	29,0	1,2	1,5	1,5	1,5	0,2	31,5	356,3	415,0	43,8	458,8	3,7	11,0	0,1	11,1	0,770	830,6
352 RUA EUGENIO CASTRO R	Boavista/Rotunda	290,0	29,0	1,2	1,5	1,5	1,5	0,2	31,5	356,3	415,0	43,8	458,8	3,7	11,0	0,1	11,1	0,770	830,6
370 RUA EUGENIO CASTRO R	Boavista/Rotunda	290,0	29,0	1,2	1,5	1,5	1,5	0,2	31,5	356,3	415,0	43,8	458,8	3,7	11,0	0,1	11,1	0,770	830,6
686 RUA TENENTE VALADIM R	Boavista/Rotunda	290,0	29,0	1,2	1,5	1,5	1,5	0,2	31,5	356,3	415,0	43,8	458,8	3,7	11,0	0,1	11,1	0,770	830,6
174 CAMPO MARTIRES PATRIA CPO	Gonçalo Cristóvão/Baixa	281,5	28,2	1,1	1,4	1,4	1,4	0,2	31,5	346,8	415,0	43,8	458,8	3,7	10,7	0,1	10,8	0,770	820,8
46 CAMPO MARTIRES PATRIA CPO	Gonçalo Cristóvão/Baixa	281,5	28,2	1,1	1,4	1,4	1,4	0,2	31,5	346,8	415,0	43,8	458,8	3,7	10,7	0,1	10,8	0,770	820,8
9 LARGO ADRO LG	Gonçalo Cristóvão/Baixa	281,5	28,2	1,1	1,4	1,4	1,4	0,2	31,5	346,8	415,0	43,8	458,8	3,7	10,7	0,1	10,8	0,770	820,8
48 LARGO FONTINHA LG	Gonçalo Cristóvão/Baixa	281,5	28,2	1,1	1,4	1,4	1,4	0,2	31,5	346,8	415,0	43,8	458,8	3,7	10,7	0,1	10,8	0,770	820,8
26 LARGO PROF ABEL SALAZAR LG	Gonçalo Cristóvão/Baixa	281,5	28,2	1,1	1,4	1,4	1,4	0,2	31,5	346,8	415,0	43,8	458,8	3,7	10,7	0,1	10,8	0,770	820,8
54 PRACA FLORES PC	Gonçalo Cristóvão/Baixa	281,5	28,2	1,1	1,4	1,4	1,4	0,2	31,5	346,8	415,0	43,8	458,8	3,7	10,7	0,1	10,8	0,8	820,8
95 RUA JOAO BAPTISTA LAVANHA R	Foz/Gomes da Costa	241,5	24,2	1,0	1,2	1,2	1,2	0,2	31,5	302,0	415,0	43,8	458,8	3,7	9,4	0,1	9,4	0,8	774,6
67 RUA INFANTE SANTO R	Foz/Gomes da Costa	241,5	24,2	1,0	1,2	1,2	1,2	0,2	31,5	302,0	415,0	43,8	458,8	3,7	9,4	0,1	9,4	0,770	774,6
399 RUA ALEGRIA R	Marquês/Constituição	226,0	22,6	0,9	1,1	1,1	1,1	0,2	31,5	284,6	415,0	43,8	458,8	3,7	8,8	0,1	8,9	0,770	756,7
582 RUA ALEGRIA R	Marquês/Constituição	226,0	22,6	0,9	1,1	1,1	1,1	0,2	31,5	284,6	415,0	43,8	458,8	3,7	8,8	0,1	8,9	0,770	756,7
7742 ESTRADA CIRCUNVALACAO EST	Bonfim/Campo 24 Agosto	226,0	22,6	0,9	1,1	1,1	1,1	0,2	31,5	284,6	415,0	43,8	458,8	3,7	8,8	0,1	8,9	0,770	756,7
7762 ESTRADA CIRCUNVALACAO EST	Bonfim/Campo 24 Agosto	226,0	22,6	0,9	1,1	1,1	1,1	0,2	31,5	284,6	415,0	43,8	458,8	3,7	8,8	0,1	8,9	0,770	756,7
11 LARGO JOSE MOREIRA SILVA LG	Bonfim/Campo 24 Agosto	226,0	22,6	0,9	1,1	1,1	1,1	0,2	31,5	284,6	415,0	43,8	458,8	3,7	8,8	0,1	8,9	0,770	756,7
116 PRACA MARQUES POMBAL PC	Marquês/Constituição	226,0	22,6	0,9	1,1	1,1	1,1	0,2	31,5	284,6	415,0	43,8	458,8	3,7	8,8	0,1	8,9	0,770	756,7

Table 2. Estimate of economic land rent and surplus values of land aimed at office uses in Oporto city (excerpt from the database)

Unit: Euros											
Address	Zone in Oporto city	Land use coefficient	Average number of floors	Anticipated office selling prices/m ₂	60% of income/m ²	Land, development, building, management, administrative, marketing, and financial costs, property taxes/m ² , and normal profit rate/m ²	Economic land rent/m ² [1]	Land rent/m ² [2]	Land market value/m ² [3]=[1]+[2]	Land patrimonial value/m ² [4]	Surplus-values [3]-[4]
203 RUA GUEDES AZEVEDO R	Gonçalo Cristóvão/Baixa	5	1,85	1554,3	1726,9	543,4	1183,6	281,5	1465,1	645,2	819,9
227 RUA PINTO BESSA R	Corujeira/S. Roque da Lameir	5	1,85	1260,8	1400,9	515,4	885,5	173,5	1059,0	745	314,0
242 RUA S BRAS R	Gonçalo Cristóvão/Baixa	5	1,85	1504,2	1671,3	543,4	1128,0	281,5	1409,5	649	760,5
2533 FERNAO MAGALHAES AVE	Paranhos/Costa Cabral	5	1,85	935,3	1039,2	511,7	527,5	159,0	686,5	758,4	-71,9
35 RUA LIMA JUNIOR R	Paranhos/Costa Cabral	5	1,85	1284,0	1426,7	511,7	915,0	159,0	1074,0	756,2	317,8
411 RUA CASTELOS R	Ramalde/Monte dos Burgos	5	1,85	1362,1	1513,5	513,0	1000,5	290,0	1290,5	753,8	536,7
433 RUA NOSSA SENHORA FATIMA R	Boavista/Rotunda	5	1,85	1436,0	1595,6	545,6	1050,0	290,0	1340,0	637,4	702,6
49 RUA FORMOSA R	Bonfim/Campo 24 Agosto	5	1,85	1429,5	1588,3	528,9	1059,4	226,0	1285,4	659,5	625,9
55 RUA DR RICARDO JORGE R	Gonçalo Cristóvão/Baixa	5	1,85	1377,0	1530,0	543,4	986,6	281,5	1268,1	659,2	608,9
57 RUA FLORES R	Gonçalo Cristóvão/Baixa	5	1,85	858,0	953,3	543,4	409,9	281,5	691,4	653,1	38,3
393 RUA ALEGRIA R	Marquês/Constituição	5	1,85	1472,4	1636,0	529,0	1106,9	226,0	1332,9	696,5	636,4
1395 RUA CONSTITUICAO R	Marquês/Constituição	5	1,85	1304,9	1449,9	529,0	920,9	226,0	1146,9	694,3	452,6
455 COMBATENTES GRANDE GUERRA AVE	Antas	5	1,85	1160,3	1289,2	525,3	764,0	211,5	975,5	705,8	269,7
8 RUA BRAS CUBAS R	Antas	5	1,85	1052,4	1169,3	525,3	644,0	211,5	855,5	705,1	150,4

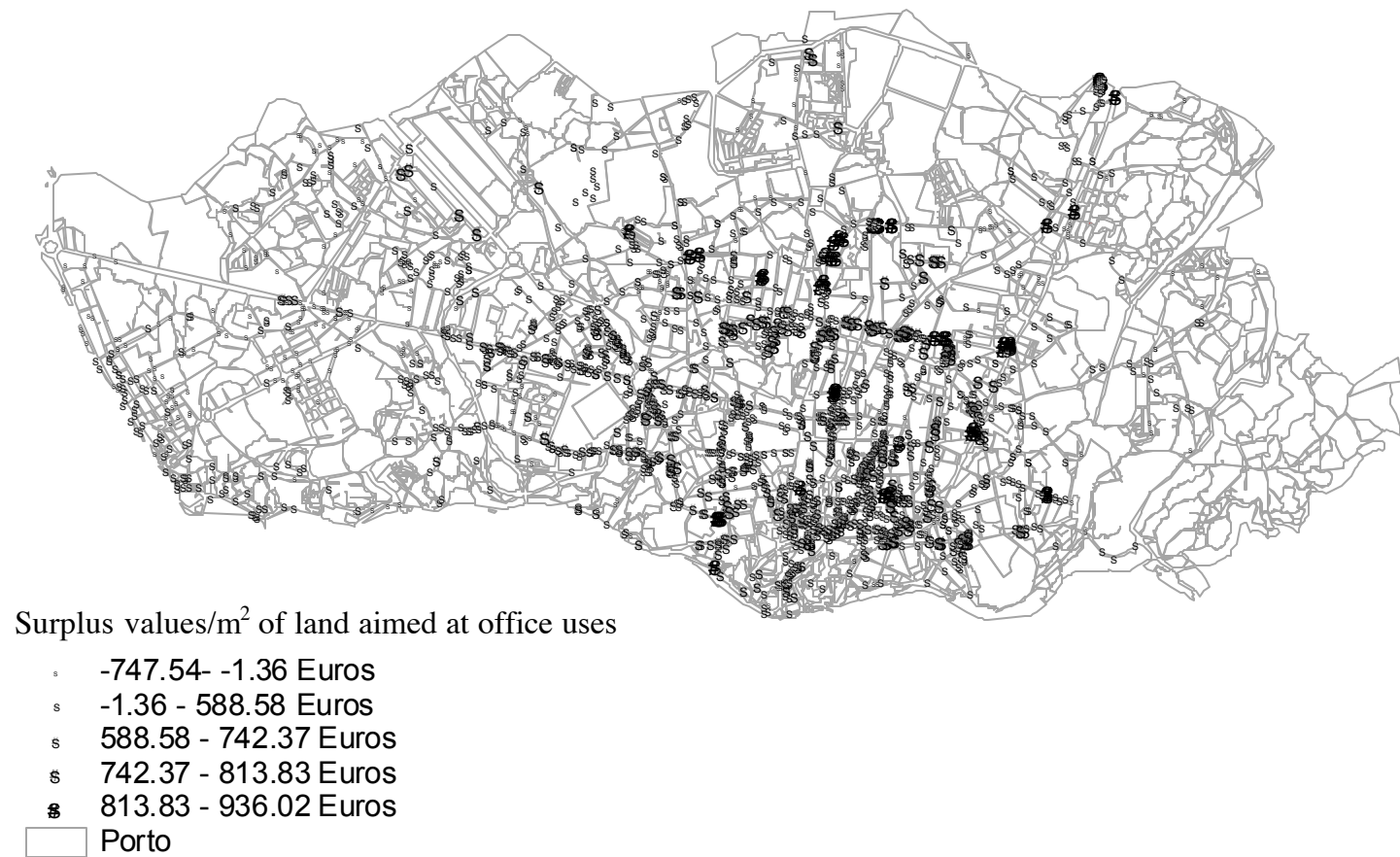


Figure 3. Expected distribution of surplus values of land aimed at office uses in Oporto city, according to the proposed methodology

An accurate land use policy should allow a balance between public and private interests, through clarification of the relations between the publicly assigned jurisdiction of territorial planning and land dominial rights (Correia, 1993). A better knowledge of surplus-values and of the factors that underlie their formation avoids, on the one side, speculative land prices and marginal uses (different from the uses claimed by planning guidelines), and prevents, on the other, the double taxation of income property. If planning tools provide a clear and objective separation between the contribution to property values that accrue from public administration, and the contribution that result from private interventions, then it will be easier to vindicate the public interest, however respecting property interests and rights. In these circumstances, the fiscal legislation may better and neatly suit planning and urbanistic priorities. With the methodology proposed in this research, public administration becomes aware, in each moment, of the market values of land plots, and of the values that proceed from the application of the official valuation code, thus it becomes able to master land values (according to respective characteristics and location), and the surplus-values engendered by its own decisions. This promotes its ruling action concerning land plot management and provision for the different kinds of uses, at controlled prices (Anderson, 2005; Pardal, 2003). The control over land availability may also include ownership and management of a land trade exchange (Pardal, 2006a). In this case the administration can put on the market more land parcels with certain characteristics in determinate zones, according to price levels and goals pursued (for equipments, services and other undertakings), in direct competition with land plots provided by the private supply (Correia, 1993). Appropriate planning policies and tools can further increase control over urban sprawl. If promoters/developers/sellers can't so easily extract gains from surplus-values, they will naturally react with a decrease in new urban development initiatives and investments. Consequently, their resources and initiatives will be redirected by planning policies and incentives, in order to respond to other kinds of concerns, (including investments in rehabilitation or in renting markets).

Planning strategies and measures should contribute to stimulate economic and social development through: (i) a deeper assessment of land and real estate markets (namely in what concerns land use classifications, and market segmentation), (ii) differential taxation of the component parts of the whole real estate increased value, (iii) a correct land policy operationalization, and (iv) the need to improve market regulation.

The planning system should pursue deeper and comparative analysis of the different public and private supply behaviours, and confront them to the multiple kinds of demand¹⁰ (Harter-Dreiman, 2004; Lipsey and Chrystal, 1983; Pardal, 2006a; Rebelo, 2003), because it allows a whole evaluation of the variables that shape surplus-values formation, and the computation of respective values¹¹. The awareness of the amount of surplus-values engendered by administrative decisions (namely concerning land use classifications) when territorial plans and other planning tools are worked out, allows a better evaluation of their impact on land plot's juridical status, and on market values (Pardal, 2006a). This, by its turn, reinforces the connections between planning and the general performance of the economy.

¹⁰ Demand can be subdivided into the following segments: (i) useful demand (that searches for spaces that fulfil basic needs), (ii) demand for income properties (that generally fits the useful demand), and (iii) speculative demand (that withhold the land social function, through investment in root assets, that often translate in passive retention strategies).

¹¹ This prevents, namely, landowners' passive retention strategies.

Public administration should not tax the whole property's increased value, in order not to interfere into firms' profits, on the one hand, and not to discourage the private initiative, on the other¹². Despite in Portugal taxation never surpassed 50% of the whole value of the sum of profits to pure urbanistic surplus-values, the major difficulty arises because of the lack of an updated system of land and real estate price lists (Rebelo, 2003).

Considering the increasing importance of local in relation to total territorialities, the knowledge of surplus-values contributes to a better operationalization of the changes in land use, and to a better assessment of its impact on the performance of the economy¹³ (Pardal, 2006a). In order to warrant the operation of land use changes, and the taxation of surplus-values, some management information systems are currently being developed in Portugal. Such is the case of the national system of exploration and management of cadastral information (SiNErGIC), and the management information system attached to the municipal tax on real estate (SIMI). Local management information systems with characteristics similar to the one developed in this research and reported in this article are extensible to different urban realities, and applicable to different markets. They are valuable sources of information that feed models for on-going computation of property values and surplus-values, according to types of uses, location and characteristics. These models are flexible enough to incorporate new and updated information.

In the absence of an appropriate property market regulation, private supply will probably resource to speculative behaviours, what can turn against itself because it often unchains and legitimates abusive counter-measures (this happened, for instance, in the renting freezing process that occurred in Portugal in 1948) (Pardal, 2006a). A better regulation of property markets relies on a deeper knowledge of land and real estate prices and their underlying reasons, as well as on a widespread awareness of the importance and worth of surplus-values.

It is outstanding that the fiscal reform Portugal is currently undergoing stands, on the one side, on the warranty of higher justice and equily levels among all citizens, and on the other, on an efficient operation of the fiscal system, namely through control over fraud and tax evasion – not only through budgetary control, but also through settlement of assessable bases that better fit free market dynamics. In the scope of an informed and enlighten land use policy, and considering the current economic and territorial framework, property taxation should take into account the level of services and infrastructures to attend certain areas. Therefore, the tax should only fall on the territorial-based value (with appropriate landmarks), and the profits that proceed from the private initiative should be taxed at a different rate (Arnott and Petrova, 2006; Correia, 1993; Lee, 2003; Pardal, 2004, 2006a). This assures tax neutrality in relation to the owners' investment, and the methodology here proposed helps to fulfil this goal.

A better awareness of the underlying conditions and ways to assess surplus-values will probably exert the impacts on property agents' behaviours following on. Landowners can still continue to search for profits, and to have their own initiatives encouraged and rewarded. However, they are prevented from their extended prerogatives in land policy and cease to take advantage from their monopolistic/oligopolistic power. Promoters/developers/builders become able to develop their activities in a more informed way, because their decisions are

¹² It is worthwhile noting that the private initiative is overmastering in unruled free markets, as is the case of Portugal

¹³ As it allows the computation and quantification of the effects that land use changes exert on land values.

better guided by the variables underlying demand, and by the variables underlying other suppliers' decisions, becoming thus more aware of legal, planning and market restrictions they will effectively face. Property mediators, in their professional activities, can as well take advantage of these analysis and intervention tools, that may potentially engender a better efficiency in their decisions, namely through a reduction in time adjustment mismatches between supply and demand. Through rendering easy the accessibility of final consumers (buyers or tenants) to real estate products that fulfil their needs, and to a wider range of choices of characteristics and location, they will probably contribute to lower transaction prices, still holding reasonable profit levels. Credit institutions will have landmarks settled on the assumptions for credit concession, thus using more realistic and social-oriented criteria. Finally, this knowledge and these tools allow regional and local public authorities for: (i) a more effective, balanced and informed intervention on property markets, (ii) the real-time provision of land and real estate products for the different needs, (iii) a better monitoring and control over property prices, (iv) prevention of speculative processes upstream and downstream the land development chain, (v) assertion of the neutrality of the landowners' interests in face of land use dynamics and changes in intensity of use anticipated by planning decisions, and (vi) a better control over taxation mechanisms, and over the collection of property taxes (namely through parameter setting, and control over the distribution of the surplus values).

5. CONCLUSIONS AND RECOMMENDATIONS

Surplus-values are generated by administrative decisions of municipalities – that are the entities that decide on changes of land use or intensity of use, and detain the responsibility to rule land and real estate markets. But all participants in the development productive chain should be encouraged to bring in to the economy the respective added value, thus reaching acceptable profit margins, however observing market rules, urban regulations and land use policy principles (Clark, 1995; Correia, 1993; Pardal, 2006a,b). In the absence of a clear and objective assesment of surplus-values (including their generation, quantification and distribution), urban development or recovery processes risk to be blocked either by supply or by demand. The model to evaluate, compute and quantify surplus-values proposed in the research reported in this article seeks to fight and prevent the speculation problem, in an effective and efficient manner, thus reinforcing planning strategic priorities. As such, it should be considered in territorial plans and other land use tools, in order to appraise the economic and social impacts of administrative decisions and public investments concerning land uses or intensities of use. Decision-makers should implement planning strategic priorities in order to foster urban and socio-economic development, assuring land usefull purposes and social functions, through surplus-values mastery.

According to the main thrust of the research reported in this article, concrete measures to control speculation embrace, namely: (i) rethinking the articulation between the urbanistic legislation and the base law of the territorial ordinance and urbanism policy, the juridical regime of territorial management tools, and the land use law, (ii) redefinition of land use policies, and of plans and other planning tools, (iii) reorientation in property taxation, (iv)

inducement of changes in property agents' behaviours, and (v) reassessment of surplus-values implications over social and economic development.

The return of surplus-values back on behalf of the state, entrusted with its more just and equitable distribution, settles as one of the basic challenges that new Portuguese land use law, land policy, and planning entities should face. The clear distinction between the increase in land and real estate values that follows on from planning decisions and the ones that result from landowners' initiative and investment (this article is expected to have contributed to) should support the application of a more fair taxation over surplus-values, that better fit local realities, and contribute to: (i) warrant that the product of surplus-values revert on behalf of populations, (ii) help to control real estate prices, and (iii) prevent/control speculation and, in many cases, corruption. Planning measures should be taken in order to assure higher transparency, and enhance citizens' participation in the working out of municipal urbanistic plans that directly concern them (Agência LUSA, 2007). This stimulus to citizens' participation, framed by a better juridical, urbanistic and economic articulation, will certainly reinforce devotion, participation and conformation of citizens' private initiatives to the effective content of plans, aimed at planning strategic goals, within the strict accomplishment of legal precepts. Some concrete measures to reach those goals are (Agência LUSA, 2007): (i) aggravation of the fiscal burden of land plots located within the urban perimeters that stand unused during a period of time longer than the one considered normal and reasonable, and the some applies to vacant and derelicted buildings, (ii) obligation to publish the name of all owners of land plots during the five years previous to their (re)qualification, (iii) claim for public declaration of all assets pertaining to autarchic representatives, and (iv) creation of the urbanization agent figure, with mediation prerogatives between public administration and landowners when development processes are unchained.

It is hoped that this proposed methodology and developed model contributes to support urban policy decisions in planning, economic, legal, fiscal and territorial terms in the scope of property use and management¹⁴, and in activities' location. A better knowledge of: (i) land and real estate price formation mechanisms, (ii) the mutual cause-and-effect relations between them, (iii) the land economic rent, (iv) the surplus-values, (v) the urbanistic legal framework, (vi) the planning policies, tools, characteristics and operation conditions, (vii) the socio-economic conditions, (viii) the property taxation system, and (ix) the behaviours of property market agents, reinforces the role of planners and decision-makers in regulation, guidance, coordination and control over land uses. This role translates, namely, in a more accurate intervention in property markets, namely through the use of tools that allow for the analysis, monitoring, visualization and simulation of results that proceed from alternative urban policies, and through a more effective application of taxation tools, founded on an objective appraisal of property values that result from planning decisions and public investments.

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¹⁴ This includes taxation options.

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