

Evaluation of the Execution of Development Plans with Transfer of Development Rights

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Abstract: In the last decades there has been an urban growth around the main cities, Lisbon and Oporto, as well as in coastal municipalities, from Setúbal to Minho and the Algarve region, expansions which were made mostly through private development projects, as the territorial coverage of Detailed Plans (PP) and Urban Zoning Plans (PU) did not allow to meet the dynamics of urban expansion. However, the problem is not limited only to the production of plans in insufficient quantity. In fact, most plans have a very low real effectiveness. It is in this context that the transfer of development rights (TDR) arises as a tool for improving cooperation between owners and between them and Public Authorities, providing a greater feasibility of plans.

The TDR was introduced in the framework of urban planning in Portugal, through the *Lei de Bases da Política de Ordenamento do Território e do Urbanismo* (LBOTU) - Lei 48/98, and regulated by the *Regime Jurídico dos Instrumentos de Gestão Territorial* (RJIGT) - Decreto-Lei 380/99 that establishes the Legal Framework of the Instruments for Territorial Management. Because it has been 10 years since its publication, it is extremely relevant to analyze the application of this instrument in Portugal in order to assess its effectiveness and use in the current plans. The aim of this work is also to identify the main obstacles to the implementation of this instrument at the various plan stages, while suggesting proposals for best practices and for the increasing of its effectiveness, from plan elaboration to plan implementation.

Keywords: Detailed Plan, Urban Zoning Plan, Transfer of Development Rights, Legal Framework of the Instruments for Territorial Management

1. Introduction

The development of the urban space in Portugal has been characterized by a sum of private development projects executed without the framework established by plans of a larger hierarchy, which has conditioned its quality and the access to the municipal infrastructures.

In order to avoid a situation in which some lucky land owners have more rights of construction than others with the same (or even more) land area, an instrument - the transfer of development rights - was created, which not only allows to reach equity between land owners but also avoids real state speculation, and the lobby effect towards the administration, contributing to a more transparent and fair system. Throughout this research an analysis of the consulted plans will be conducted in order to characterize the present situation in terms of application of the instrument in study. Some of those plans will be turned into case studies. Also, the main obstacles to the

implementation of transfer of development rights will be identified and some proposals to solve some of those issues, as well as proposals for future developments will be presented.

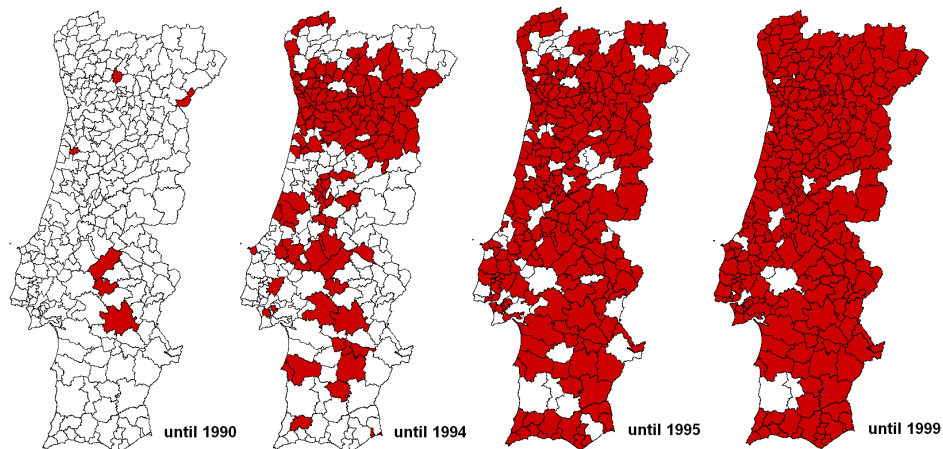
2. Legal Framework

2.1. The *Lei dos Solos* and *LBOTU*

In Portugal until 1965 all the urban planning and urban land production was regulated by the Administration. From that year on, with the publication of Decreto-Lei nº 46 673, the Estate considers that the private sector can respond to the demand of urban land. What should be an exception, in other words, the production of urban land being carried by the private sector, has become the rule, being the Administration passive and not making any real efforts to deal with the demand and the population growth. That is one of the main reasons why the private sector took over the urban production process, being responsible for the majority of the urban interventions in the urban area.

In the year 1970 the first legal document which regulates the land uses, the *Lei dos Solos*, by Decreto-Lei 576/70 of 24th November was published. Later on, in the year 1976 a new version of *Lei dos Solos*, by Decreto-Lei 794/76 of 5th of November, was published and is still in use, establishing the standards of application for some urban procedures. This legal document's main purpose was already the fight against speculation.

Although some Municipal Master Plans (PDM) were published in the 80's, the publication of most PDM only took place in the 90's. In 1990 the Decreto-Lei 69/90, of 2nd of March is published, regulating the Municipal Development Plans (PMOT) and defining the contents of the Municipal Master Plan, Urban Zoning Plans and Detailed Plans. There were made some financial measures that gave will and support to the municipalities concerning the elaboration and approval of Development Plans, as a way to allow the municipalities to have the necessary budget to build infrastructures and equipments.



Picture 1 – Evolution of PDM approval in Portugal

Source: INE, Statistical Yearbook of Portugal 2004, Lisbon 2005

As it can be seen on picture 1, there has been a great adherence by the municipalities in the elaboration and approval of PDM, and in 1999 almost every municipality had approved PDM, but only later, in 2004, were all plans of the mainland ratified.

In the year of 1998 the *Lei de Bases da Política de Ordenamento do Território e do Urbanismo* (LBPOTU) - Lei 48/98 is published with the aim of ensuring the development of the national territory in a harmonious and sustainable way, promoting values like equity, quality of life and the cultural and natural patrimony defense. It is the 5th article of LBPOTU that introduces the principle of equity in the urban planning policy for the first time. It is in this context that the transfer of development rights (TDR) appears, as an instrument with the goal of assuring the redistribution among stakeholders of the benefits and costs of implementing a plan. Therefore, with the 18th article it is established the obligation for the planning instruments associated to private sector to include equity mechanisms of transfer of development rights. This legal document served as a base to the *Regime Jurídico dos Instrumentos de Gestão Territorial* (RJIGT) - Decreto-Lei 380/99 (Legal Framework of the Instruments for Territorial Management), which develops the TDR, having achieved some measures in the urban management, already defined by *Lei dos Solos* but without a significant application, making the engagement between the owners and the developers, as well as with the municipalities much easier.

2.2. Legal Framework of the Instruments for Territorial Management

As mentioned previously, it was in the Decreto-Lei 380/99 that the transfer of development rights was regulated for the first time as an instrument of urban management and planning in Portugal. It is in the 137th article of this legal document that the main aims of this instrument are specified:

- Redistribute the gains assigned by the plan to the owners;
- Obtain the financial means to assure the execution of infrastructures and the payment of compensations for expropriation;
- Incentive of land offer for urbanization and construction, avoiding behaviours like the retention of land for speculative purposes;
- make land and buildings available to the municipalities for the installation or renovation of infrastructures, equipments and urban spaces of collective use, and for compensation of private owners, if necessary;
- eliminate the pressures and the lobbies of land owners and groups to guide the solutions of the plan in the direction of their intentions.

The Decreto-Lei 380/99 defines the application of the transfer of development rights at a Detailed Plan scale, but it also defines that some material respecting to that matter should be developed in other municipal development plans, Municipal Master Plan and Urban Zoning Plan.

According to the 120th article of Decreto-Lei 380/99, it can be defined execution units, which result of the definition on a cadastral map of the physical boundaries of the area subject to urban interventions, including the identification of all the buildings and owners covered. These areas should be defined according to some criteria, to ensure a harmonious urban development and the fair distribution of benefits and burdens among the property owners involved.

The implementation of urban operations relative to each execution unit can be done by different execution systems, which are defined in the articles 122th, 123th and 124th of Decreto-Lei 380/99, according to the ones involved in the urbanization process:

- compensation system – all the land owners are responsible, and should associate so they can proceed with the transfer of development rights and compensate the municipality according to the rules defined in the plans or in the municipality regulations;
- cooperation system – initiative of the municipality, but giving the possibility for all the interested owners to cooperate. The programming of the execution is done by the municipality in collaboration with private sector, being the rights and obligations defined in the Urbanization Contract, established between them.
- administrative imposition system – the municipality assumes the task of urbanization, acting directly or by concession of urbanization, which requires the realization of a public concurrence. The owners should subscribe an agreement proposed by the municipality, within a determined period, as they are subject to be expropriated if they do not do so.

The RJIGT also defines execution instruments, which are:

- preference right;
- building demolition;
- expropriation;
- restructuration of property;
- right to be expropriate by public utility (to be demanded by land owners);
- parcelling of the urban lands according to the guidelines of the plan.

The application of the transfer of development rights can be made through mechanisms that have the purpose of developing a fair and balanced compensation system. The Decreto-Lei 380/99 through its 138th article defines three mechanisms, which are:

<p>average use index</p>	<p>(equation 2.1) $AUI = \frac{\sum F_j}{S_g}$</p>	<p>where:</p> <ul style="list-style-type: none"> • $\sum F_j$ represents the gross floor area, being F_j the area of the j^{th} floor; • S_g represents the gross surface.
<p>average area transfer</p>	<p>(equation 2.2) $AAT = \frac{\sum A_{transf}}{\sum F_j}$</p> <p>* despite the RJGT only mentions this index, it can be determined by this expression</p>	<ul style="list-style-type: none"> • $\sum A_{transf}$ represents the sum of transfer areas of each execution unit; • $\sum F_j$ represents the gross floor area, being F_j the area of the j^{th} floor.
<p>allocation of urbanization costs</p>	<p>It is determined accounting the total cost of infrastructure facilities of the plan and redistributing it to the owners in proportion to their correspondent gross floor area</p>	

This legal document defines that the municipality can use these mechanisms together or in a coordinate way, but there is always the possibility of using other mechanisms.

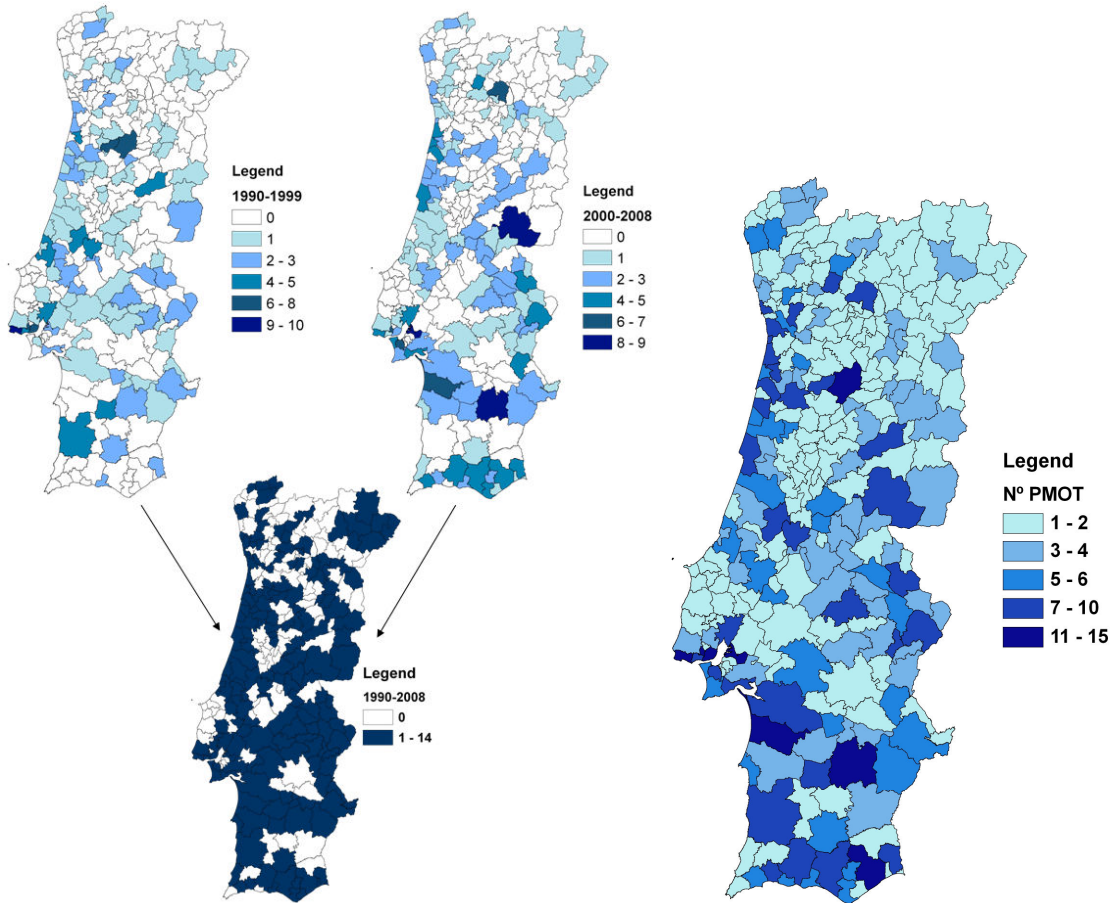
3. Application of “Transfer of Development Rights” in Portugal

3.1. Urbanistic evolution in Portugal in the last decades

The urban growth which took place in the last decades has been characterized by the expansion of suburbs around the main urban centers, Lisbon and Oporto, as well as coastal municipalities, from Setúbal to Minho and the Algarve region. This expansion was made mostly through private development projects, as the territorial coverage of PP and PU did not reflect the dynamics of urban expansion. According to studies of the Comissão de Coordenação e Desenvolvimento Regional de Lisboa e Vale do Tejo (CCDR-LVT), a first generation Municipal Master Plan took an average of 9 years to be completed, an Urban Zoning Plan took 5 years, and a Detailed Plan took about 3 years.

On picture 2 are presented cartograms, made through ARCGIS software, with the distribution of Detailed Plans per municipality between the years 1990 and 1999 and the years 2000 and 2008. In the last 20 years, 120 municipalities did not publish any Detailed Plan, which represents circa 37% of the total number of municipalities in Portugal. In terms of territorial distribution, this situation corresponds to a great part of the north and the west coastal region. The municipalities of Amadora, Beja and Vila Franca de Xira are highlighted, as they kept a good rhythm of Detailed Plan production in the last two decades.

By the analysis of the cartogram shown on picture 3, it can be concluded that the majority of the municipalities in Portugal only have a PDM (74 municipalities) or a PDM and one more plan (76 municipalities). It can be also concluded that about 21% of Portugal land (circa 19300km²) is not covered by a planning scale higher than 1:25000, only having a PDM.



Picture 2 - Current PP published between 1990 and 1999, 2000 and 2008 and from 1990 until 2008

Picture 3 - Cartogram with the distribution of PMOT in Portugal

3.2. Analysis of the actual situation

A research of Urban Zoning Plans and Detailed Plans took place in some entities in order to select some examples of good and bad practices. The plans selected were rather after the publication of Decreto-Lei 380/99, as it was by this legal document that the transfer of development rights was regulated for the first time in Portugal.

After some research, it was concluded that it would be difficult to obtain plans in adequate quantity and with the necessary information to do a reasonable analysis regarding the transfer of development rights application, specifying good and bad practices. It has been resorted to another approach of the problem, trying to rank the plans in groups representing typologies of development of the instrument in study, allowing its easier analysis and systematization and still finding reasons for the state of implementation. The sample consists of 32 PP and its

distribution is shown on picture 2. The analysis was separated, as the sample consists of plans in which was possible to have access to all its contents and plans in which was only possible to have access to the regulation.

Three groups were defined according to the development grade of the instrument in study:

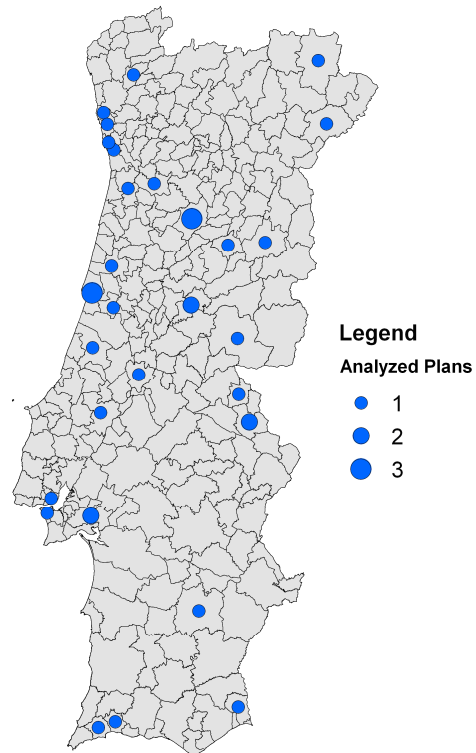
- *Group A* – Complete omission of the contents of transfer of development rights;
- *Group B* – Lack of some contents of transfer of development rights;
- *Group C* – Definition of the fundamental elements of transfer of development rights.

In this classification, only the Detailed Plans are considered, as they are the plans where the transfer of development rights can be implemented with more effectiveness.

In the group A are included the plans that have not any reference to the transfer of development rights, in other words they do not define the execution system, mechanisms nor execution instruments. The group B includes the plans that only contain some of the items referred previously, being its contents insufficient to understand the compensation model. Finally, the group C contain all the plans that are explicit in the way the transfer of development rights is applied, in other words, the plans that define the mechanisms being used, as well as its values and the way they are determined, being the execution system defined or not. The plans from this last group will form the case studies that will be analyzed later.

It has been tried to find reasons to justify that the plans were in a determinate group, like the type of propriety (fractionated or concentrated), the number of owners and the its importance, the existence of lands owned by the municipality. However it was not possible to find any correlation between the development of the instrument in study and the aspects referred previously. After analysing the plans it has been verified that they present a great heterogeneity in the way they develop the transfer of development rights, what made difficult the task of classifying the plans in the groups, requiring some iterations before achieving the more coherent and robust classification possible. The great heterogeneity of the plans did not allow a more rigorous analysis, as a clusters or a multi-criteria analysis, so it can only be made a qualitative analysis of the application of the instrument in Portugal.

From the sample analyzed through the regulation, it can be concluded that circa 57% of the plans correspond to the Groups A and B, being the remaining percentage associated to the



Picture 4 – Distribution of the analyzed plans through mainland of Portugal

Group C, proportion that is maintained for the universe of plans in which the access to all elements was made possible.

3.3. Comparative analysis of case studies

The plans classified in the group C were deeply analyzed, as well as the Urban Zoning Plans (summing a total of 9 plans), to evaluate the effectiveness and efficiency of the compensation model and make conclusions about its operationalization and its relevance as examples of good practices. Though the execution of Detailed Plans depends on many factors, like economic and financial situation, difficulties in the expropriation of lands, will and political priorities, among others, it seems like it can be concluded that the use of simpler compensation models leads to an easier operationalization of the plan. The analysis has been made concerning issues such as the identification of the execution system, compensation mechanisms, the index values and how they were determined, and the use of execution units and execution instruments, including parcelling and expropriation.

4. Critical Analysis of the Application of TDR in Portugal

With the introduction of *Lei de Bases da Política de Ordenamento do Território e do Urbanismo*, it was defined clearly as a responsibility of the Public Administration, namely the municipalities, the role of planning, imposing the collective interest over the private interest.

The introduction of the Legal Regime of the Instruments of Territorial Management (RJIGT), published for the first time in Decreto-Lei 380/99 led to separate interpretations, in some way due to its drafting, that gives way to some ambiguity. Although this legal document has been altered sometimes until Decreto-Lei 46/2009, there has been few changes relative to transfer of development rights, leaving some issues still unclear, namely:

- the obligation of combining the average use index with the average transfer area, as it is not reasonable sometimes;
- concerning the operationalization of the compensation fund as it is fixed in the legislation (only in money) versus a compensation fund that works as a municipality land stock, which permits a better negotiating capacity, by exchanges and compensations made in specie.

Besides these aspects, it is considered essential to define the elements of transfer of development rights that should appear in the regulation of the Detailed Plans, to guarantee its accomplishment, as it represents along with the synthesis map and the constraints map, the only element with binding character of plans. Moreover, after an analysis of the regulations of Detailed Plans of the sample studied, it was verified that the contents related to the transfer of development rights are not homogenous, which do not facilitate the analysis and

comprehension of the compensation model by the interested parties. With the definition of the elements of the instrument in study in the regulation, it becomes obligatory to justify the omission of transfer of development rights, whenever it is not applied, being also possible to standardize the contents of the regulation in this matter, without reducing the flexibility necessary in the execution instruments and execution systems. It would be good if the plans included an alternative scenario to permit some flexibility choosing the execution system in case the one defined cannot be used.

An inquiry was made to some experts in the matter in order to understand what are the main elements to include in the regulation of the plans, as well as trying to understand what are the main factors that explain the difficulty in the application of the transfer of development rights. Through the presented opinions it seems it can be concluded that the more important elements to include in the regulation of the Detailed Plans are the mechanisms and the values of the compensation indexes, being considered still important but at a less degree, the definition of the execution systems. It is considered that the main obstacles of the transfer of development rights application are:

- the lack of know-how of the urban planners and local authority staff;
- lack of knowledge of the owners.
- the difficulty in the application of the expropriations;
- the absence or obsolescence of the register;
- the structure of property;

According to Rute Antunes, in 150 Detailed Plans analyzed, only 30 plans have criteria of transfer of development rights (Antunes, 2009), which is much lower than the desirable. To avoid the prosecution of this situation it is suggested the creation of standards by the DGOTDU, in order to serve as a good practice guide for municipalities and entities that prepare Detailed Plans, while not reducing their freedom. The creation of a check list to be used by the CCDR's is also proposed to guarantee that the plans contain the necessary information for understanding the compensation model, as well as the justification for the cases where the transfer of development rights is not applied.

5. Final Conclusions and Proposals

The transfer of development rights appears in the urban planning as a solution to guarantee the fair distribution of benefits and charges of the owners of a plan, but also between private sector and Public Administration, namely municipalities.

Moreover it also permits reducing the speculation in the real state market, which mostly values the land by its allowed construction capacity. Therefore, lands with similar characteristics can present different valorations, which results of the urban design defined by the municipality for that area. In this way, the transfer of development rights makes the valuation of the land more transparent and fair, as the owners are no longer subject to the luck or the bad luck concerning

the building capacity in their lands, because they will be compensated for the lacking building capacity by the owners with a building capacity higher than the average.

Despite the great heterogeneity verified in the Detailed Plans, it was possible to define typologies according to the development that the transfer of development rights presents in the plan. Thus three typologies were defined:

- *Group A* – Complete omission of the contents of transfer of development rights;
- *Group B* – Lack of some contents of transfer of development rights;
- *Group C* – Definition of the fundamental elements of transfer of development rights.

An analysis of the plans was made in two different scopes, one analyzing only the regulation and the other analyzing all the elements that form the plan, having achieved similar distribution of the sample. In the group A there are circa 13 to 14% of the sample of plans, representing the group B and C, each one, around 43% of the sample. For this analysis it has been considered for the systematization of the plans aspects like the execution system, the mechanisms and the execution instruments used.

By the evaluation made to the plans of the sample, and despite the execution of Detailed Plans depends of various factors like economic and financial situation and the will and political priorities, it seems one can conclude that the use of simpler compensation models allows an easier operationalization of the plan. Also it seems that Local Authorities, when directly implicated in the process of designing TDR models and plan execution, tend to assume the cost of producing *public space* (considered here in its broader sense) mostly as their own responsibility. Particularly, Local Authorities seem not being able to ensure, in an efficient and sustainable way, the necessary financial means to assure the execution of major infrastructures and urban facilities.

Thereby it is suggested that the municipalities organize clarification sessions with the purpose of making the negotiations easier and faster and avoiding that the execution of the plan be dependent of the major owners and developers.

For an improvement in the application of the transfer of development rights in Portugal it is proposed the creation of multidisciplinary teams to follow and to monitor its application from the elaboration to the implementation of the plan, besides improving the understanding with owners and developers. It is also suggested the creation of standards by the *Direcção-Geral do Ordenamento do Território e Desenvolvimento Urbano* (DGOTDU), in order to make a good practice guide for the municipalities and entities that prepare Detailed Plans, while not reducing their freedom. Finally it is proposed the creation of a check list to be used by the CCDR's to guarantee that the plans contain all the necessary information for understanding the compensation model, as well as the justification for the cases where the transfer of development rights is not applied.

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