THE COMPETITION IMPACT OF EXTENDING THE ACTIVITY OF WASTE AND WATER MANAGEMENT CONCESSIONAIRES TO COMPETITIVE MARKETS

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Abstract: *This paper discusses the analytical framework developed by the Portuguese Competition Authority to assess the impact on competition of public policy measures that authorize the expansion by an entity enjoying an exclusive right in a market covered by a concession contract to neighbouring markets that are legally open to competition. The water and waste management sector is considered as a case-study on the implementation of that analytical framework. The paper will integrate a legal perspective, considering the Portuguese legal system but also discussing the relevance of EU law, with a competition economics perspective focusing on possible distortions of competition.*

Index: 1. Introduction. 2. Analytical background: theory, practice and jurisprudence. 3. The Portuguese legal framework for water and waste management. 4. The value chain for water and waste management. 5. The impact of an extension on an exclusive right on competition. 6. Public policy measures and the duty of EU member States not to distort competition. 7. The competition impact assessment methodology. 8. Conclusions.

INTRODUCTION

Most developed economies are ruled by principles of market economy and economic freedom reflecting an underlying assumption that competition[1] in

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1 As the expression of an independent rivalry in the markets as defined by Adam Smith, in "An Inquiry into the Nature and Causes of the Wealth of Nations" (chap. 7) and explored by the economic theory during the last centuries (for a discussion of the concept see Stigler, 1957.

(or for[2]) the market is one of the main drivers of economic development and social welfare. The argument is simple: increased competition ("independent rivalry") pressures firms to present better deals to consumers (in quality and price) and to be more innovative, promoting a more efficient use of resources (in static and dynamic terms) and, as a consequence, promoting economic development and increased welfare (Syverson 2011).

Competition is thus regarded as a public good, requiring its defence and promotion through competition policy. The goal of competition policy is to act against competition distortions and to promote competition between firms in an effort to ensure a level playing field where firms compete on the merits.

Competition law enforcement, which is the visible expression of the competition policy, is primarily directed to firms' conduct, punishing cartels and other agreements and concerted practices that restrict competition, condemning abuses of dominant firms and prohibiting mergers that significantly impede effective competition. Even though the main focus of attention is on private behaviour, competition may also be distorted by public measures. While promoting the public interest or addressing market failures,[3] public bodies may influence market structure and distort the competitive relation between firms.

The level playing field may be distorted by different forms of public intervention: from the most radical transformation, with the creation of a legal monopoly or the award of a special or exclusive right, grounded on the existence of economies of scale or the necessity to guaranty universal access to an essential service; to a less obvious impact when a subsidy or a tax exemption is granted to specific firms under a regional economic policy to promote economic development and employment. In these different cases the focus of the public authorities or regulators would be a specific public interest disregarding, intentionally or not, a second public interest that is the protection of "competition" as a public good. Since the source of the distortion of competition is a public measure and not conduct by firms operating in the market, competition law enforcement is generally not applicable.

This has led to the development of advocacy tools, whereby competition watchdogs seek to influence public decision-makers so as to prevent, mitigate or even eliminate possible anticompetitive impacts arising from public measures.

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2 For a introduction of the concept of competition for the market see the seminal paper by Demsetz, H., 1968.

3 For a discussion see Noll, Roger G., 1989, and Armstrong and Sappington, 2007.

It is in this context that the "competition impact assessment" (CIA) methodology has been introduced as an instrument that evaluates the impact of public decisions on competition. The goal of this exercise is not to extol "competition" as the most important public interest, but rather to identify and discuss the impacts on competition and the consequences to the economy that may result from competition-distorting public interventions. At the end, the ultimate objective is to contribute towards a more informed decision process and more efficient public interventions.

This methodology has been implemented in different countries and institutional settings[4]. In several countries CIA is part of a wider Regulatory Impact Assessment (RIA)[5], which "is a method of policy analyses [...] intended to assist policy-makers in the design, implementation and monitoring of improvements to regulatory systems, by providing a methodology for assessing likely consequences of proposed regulation and the actual consequences of existent regulation" (Kirkpatrick and Parker, 2007). Within this framework, CIA is one of the economic impacts to be assessed, regarded as a contextual cost for firms that result from a public decision.[6]

In this paper, we apply the CIA methodology to a particular situation that presents an additional difficulty from a competition policy perspective. We discuss the competition impact of a public decision that may allow for a firm benefiting from an exclusive or special right in a market where there is a legal monopoly, to expand its activity to a market that is open to competition. The application of the CIA methodology is integrated in the Portuguese legal framework and considers the European jurisprudence on state measures that distort competition.

This question has been raised in the context of the water, wastewater and waste management activities at municipal level that function as legal monopolies under the Portuguese legal framework. By law, the public or private firms entrusted with these activities may expand their operation to complementary

4 For a revision see the OECD report, "Experiences with Competition Assessment: Report on the Implementation of the 2009 OECD Recommendation", 2014.

5 Countries like the United Kingdom, Germany, Italy, Ireland, Spain, Poland and Slovenia. For a revision of different experiences in RIA see Jacobs, 2007, and the OECD page on the subject: http://www.oecd.org/gov/regulatory-policy/ria.htm. For a discussion on the use of RIA has a political instrument see Dunlop et al, 2012.

6 In the European context the CIA in the Better Regulation program that aims to push for a more efficient public intervention. For more information on the European Commission program on Better Regulation see: http://ec.europa.eu/smart-regulation/index_en.htm.

or auxiliary activities, subject to governmental authorization following a non--binding opinion of the Portuguese Competition.

Within this framework, our analysis relates to the competitive impact of a firm's activity extension, which has been awarded an exclusive right through a concession contract to a complementary or auxiliary activity, thus entering into a neighbouring market not covered by the concession. Since the actual extension is the result of a public decision to authorize it, the analysis follows the methodology used in a Competition Impact Assessment (CIA) of a public decision.

From the perspective of a Competition Authority two interesting questions are: (1) what are the impacts on competition that may arise in this situation and (2) what are the aims to be pursued by a competition law-based intervention at this stage. We start by presenting, in section 2, a review of the main theoretical developments that support our analysis, and in section 3 the legal framework for water and waste management. The two relevant questions will be answered in sections 4 and 5 where we establish and develop the theoretical background for the legal and economic analysis. In section 6 we look at the role and the limitations imposed on all institutions involved under relevant competition law rules and EU case-law.

Section 7, provides an account of how to conduct a CIA in this market expansion scenario, proposing a three-step methodology. The first step implies a characterization of the markets where the relevant activities are conducted, to understand the economic linkages between the protected activity and the complementary or auxiliary activity, as well as the competitive structure of those markets (this first step is supported on the analyses presented in sections 4 and 5). The second step identifies possible competitive impacts using as a guideline the OECD competition assessment toolkit (OECD, 2011, Vol. 1 and Vol. 2) and the theoretical and legal background on anti-competitive conducts analyses (as developed in section 5). The third step concludes the analysis by presenting the Portuguese Competition Authority's view on the competition impact of the envisaged activity extension in that framework, engages in a proportionality test in the lines discussed on section 6, and presents possible remedies or alternatives that may be less stringent on competition.

Finally, section 8, presents the main conclusions of this paper.

ANALYTICAL BACKGROUND: THEORY, PRACTICE AND JURISPRUDENCE

The background to the methodology that we will be presenting is three folded. We build our analytical tool on three lines of policy evaluation: the theoretical treatment and institution reports on "competitive neutrality" and "regulatory neutrality"; the toolbox for CIA (and RIA), with the practical guidelines that have been developed by different institution; and the competition law and economics theory and European jurisprudence on the application of competition law to leveraging of dominant position.

Competitive neutrality has become a relevant topic for public polices and regulation in recent years[7]. In a broad sense, it refers to a market situation "where no entity operating in an economic market is subject to undue competitive advantages or disadvantages". This competitive neutral state "may be affected by ownership, institutional forms or specific objectives for certain economic agents. One example would be advantages or disadvantages conferred by governments to business activities controlled by themselves. Another relates to the non-profit sector that in some jurisdictions is active in the market place despite enjoying tax and other advantages" (OECD, 2012). It is in the perspective of the distortions that may accrue from the public intervention in markets that this concept has been discussed, especially focusing on mixed markets where sate-owned enterprises compete alongside private firms (OFT, 2010).

The acknowledgment that public participation and intervention in the markets may distort competition has raised concerns related to the impact on economic efficiency and doubts regarding the end results on welfare (Sokol, 2009 and UNCTAD, 2014). As expressed by the Productivity Commission of the Australian Government, in the "Competitive Neutrality Policy Statement", "where competitive neutrality arrangements are not in place, resource allocation distortions occur because prices charged by significant government businesses need not fully reflect resource costs. Consequently, this can distort decisions on production and consumption, for example where to purchase goods and services, and the mix of goods and services provided by the government sector. It can also distort investment and other decisions of private sector competitors"[8].

7 For a revision on the discussion and the practice on competitive neutrality see: http://www.oecd.org/competition/competitiveneutralitymaintainingalevelplayingfieldbetweenpublicandprivatebusiness.htm

8 See "Competitive Neutrality Policy Statement" available at: http://archive.treasury.gov.au/documents/275/PDF/cnps.pdf.

The same Productivity Commission also stresses that competitive neutrality "does not require governments to restructure the delivery of social programs into competitive market"; nor does it "require governments to remove community service obligations (CSOs) from their government businesses"; not even does it "imply that government businesses cannot be successful in competition with private businesses". The concern is set on avoiding that public intervention distorts "the level playing field" between public and private entities.

Focussing on the competitive advantages of sate-owned enterprises in mixed markets, Capobianco and Chistiansen (2011) refer to six situations where the competitive advantages of these firms over their rivals "are not necessarily based on better performance, superior efficiency, better technology or superior management skills but are merely government-created": outright subsidisation, concessionary financing and guarantees, regulatory financing and guarantees, monopolies and advantages of incumbency; captive equity and exemption from bankruptcy rules and information advantages.

Due to the difficulty in applying national competition laws is such situation, *ex ante* remedies have been proposed by different institutions (OECD, 2012 and OFT, 2010)[9]. In this sense, the OECD recommends "eight 'building blocks' that governments should address if they seek to obtain competitive neutrality". These are primarily related: to increase transparency and control over public intervention on the markets; the introduction of accounting rules that may allow for cost and revenues control; the establishment of adequate, transparent, and accountable compensation for state-owned firms in the market public; and the introduction of regulatory neutrality guarantying equal fiscal and regulatory conditions between public and private firms (OECD 2012).

Regarding the CIA methodology he OECD has been gathering information on different experiences on the implementation of CIA and is working to propose a uniform methodology for its application[10]. This methodology is summarized in a CIA checklist, that consists of a series of threshold questions, "that show when proposed laws or regulations may have significant potential to harm competition" (OECD, 2011, Vol 1). The public intervention is considered to have a competition-distorting effect if it:

9 As we will further develop in the text, at the EU level it may be possible to apply article 106º of the Treaty on the Functioning of the European Union (see also OECD, 2012).

10 For further information on the OECD work on this subject see the OECD Competition Assessment Toolkit: http://www.oecd.org/competition/assessment-toolkit.htm.

- Limits on the number or range of suppliers?
- Limits on the ability of suppliers to compete?
- Reduces the incentives for suppliers to compete?
- Limits the choices and information available to customers?

It is the opinion of the OECD this “checklist helps policymakers focus on potential competition issues at an early stage in the policy development process.” (OECD, 2011, Vol 1).

The same four impacts are considered in the CIA methodologies adopted in different countries like Spain, France or the United Kingdom.

In Spain, the “competition assessment report” is one of the documents that completes a RIA process. The report follows a three-step analysis: identification of possible negative effects on competition, justification of the restrictions in face of the public interest goal, the evaluation of regulatory alternatives. The OECD checklist is applied at the identification stage.[11]

In France, the Competition Authority (Autorité de la Concurrence), presents a “Guide for competition impact assessment of draft legislation”, that develops “a vade-mecum that can be used by government officials to help them identify cases that should or may usefully be submitted to the Autorité de la concurrence for an opinion, and also to assess the competitive impact of any new statutory or regulatory provisions they may propose.” This guide is constructed in a series of questions regarding the impact on competition and referring to the same issues as the OECD checklist.[12]

In the United Kingdom, the Competition Assessment is also a stage in the Impact Assessment process that is required for all government interventions of a regulatory nature that affect the private sector, civil society organisations and public services. This Impact Assessment tool is “to be used to help develop policy by assessing and presenting the likely costs and benefits and the associated risks of a proposal that might have an impact on the public, private or third sector, the environment and wider society over the long term.”[13] The OFT published a guide for policy makers for the completion of the Competition assessment setting four questions that replicating the OECD checklist.[14]

11 See http://www.cnmc.es/es-es/promoci%C3%B3n/gu%C3%ADasyrecomendaciones.aspx

12 http://www.autoritedelaconcurrence.fr/doc/guide_concurence_uk.pdf.

13 https://www.gov.uk/producing-impact-assessments-guidance-for-government-departments.

14 The former United Kingdom Competition Authority.

The third line of research that is relevant to our methodology is the modern formulation of concerns in competition law and economics over the leveraging of a monopoly or dominant position to neighbouring markets that would otherwise be competitive (Bishop and Walker, 2010, 277). Two main types of issues can be discussed here. The first deals with the use of anticompetitive practices to protect a dominant firms' hold in its primary (dominated market). This is one of the central aspects of the Microsoft antitrust litigation in the US (the tying of browsers to Windows to protect dominance in the market of operating systems for Intel compatible PCs) and the EU (the tying of Windows Media Player to Windows, again to protect dominance in the market for operating systems) (Viscusi et al, 2005, 278-280, Carlton and Waldman, 2002). For the reasons explained in the following section, in the Portuguese waste sector this scenario is unlikely as the dominant position of concessionaires in waste management is protected by a legal monopoly. The second class of issues refers to the risk of expanding dominance to a neighbouring market (Viscusi et al, 2005, 275-278, Whinston, 1990). The risk here is that "as a result of such leveraging that second market would be less competitive" (Bishop and Walker, 2010, 277). As discussed in section 4, there can also be efficiency-related rationales that justify such practices. An extensive review of the relevant case law can be found in Moura e Silva, 2010, chapters 5 and 6.

This line of literature is highly relevant in the context of this study given the legal protection afforded to concessionaires in their primary market (thus preventing any contestability of dominance, except in the long-run when concessions reach termination). In light of the deregulatory aims of the European single market and the European Commission's powers under article 106 TFEU, the European Court of Justice has developed a significant line of case-law according to which the leveraging of dominance by a firm holding exclusive rights in a primary market to a secondary market may involve not just a breach of competition law on the part of dominant firm, but also by the state awarding the exclusive right or authorizing expansion into that neighbouring market (for an extensive review, see Sierra, 2014). These theoretical, practical and jurisprudential developments are applied to the Portuguese waste sector in sections 5 and 6 below.

As stated in the introduction to this section, these three lines of theory, practice and case-law form the analytical background of the methodology proposed in this paper. The aim of this paper is to contribute to a knowledgeable, academically and legally sound approach to the issues raised by public

policy measures that allow firms holding a dominant position in a primary waste management market into neighbouring markets that could operate competitively. The methodology proposed uses the insights of those three lines of development to assess a particular public intervention in the market, pointing out to possible solutions that, as a form of *ex ante* remedies to the competitive risks identified in the literature and the case-law, may contribute to an improvement on market efficiency.

The situation that we are assessing requires special scrutiny given that we are addressing a public decision – an authorization – regarding the extension of the activity of a firm, that benefits from an exclusive or special right in a market where it provides a service of general economic interest economic – the provision of waste and water supply service. This exclusivity, that allows the firm to operate as a legal monopoly, was in itself the result of a previous public decision to grant to state or privately-owned firms the responsibility to provide those services as concessionaires. In our analyses we consider these firms has having the same benefits as a state-owned enterprise, regardless of being publicly or privately owned. The concepts of "competitive neutrality" and "regulatory neutrality" are clearly relevant in this scenario.

The contribution of this methodology to better-designed public policies in the field of waste management is to create a framework to conciliate the prevalent environmental concerns behind the authorization of expansion by concessionaires with the promotion of competition as an institutional guarantee of an efficient functioning of waste markets. It is submitted that this can be achieved by combining the insights of competition law and economic analysis of leveraging of dominance to neighbouring markets with the approach envisaged in the competition impact assessment toolkit to assess public measures and the legal principles emerging from the European Court of Justice case--law under the competition rules of the EU. The latter also provides a form of background default rule: should these concerns not be resolved through ex ante remedies or in case of non-compliance, the provide a warning as to the possible risks faced by a firm that chooses to act anticompetitively in the neighbouring market, signalling the sector for future *ex post* intervention through the imposition of sanctions. This provides the necessary inputs to design appropriate remedies to address *ex ante* possible anticompetitive risks in a coherent framework,

Although this analysis is focused on the specific issues raised in the context of waste and water management in Portugal, we believe that the methodology

developed in the following sections contributes to the theoretical and practical discussion on public intervention in the utility sector, combining the previous lines of discussion into one structured analytical tool and providing possible pragmatic solutions.

THE PORTUGUESE LEGAL FRAMEWORK FOR WATER AND WASTE MANAGEMENT

The water and waste management sector in Portugal is currently undergoing a substantial restructuring process in an effort to adapt to the new EU Directives and to economic and technical developments in the markets for these services. The institutional setting for the provision of public services for water and urban waste management is also being reformed, as are the market regimes for waste management.[15]

These changes maintain a clear focus on the compliance with Portuguese and EU environmental goals but they also reflect an explicit concern with the efficient use of infrastructure and the economic and financial sustainability of the system.

In the Portuguese legal system, the provision of water supply, wastewater management and urban waste management services[16] is one of the basic economic sectors from which private enterprise may be excluded.[17] The relevant legal regime is set in Law no. 88-A/97 which limits the private enterprise access to water collection, treatment and distribution, urban wastewater collection, treatment and disposal and urban waste management within the scope of municipalities and/or so-called multi-municipal systems (i.e. systems

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15 See Antonioli B. and Massarutto A., 2011, for a clarification on the two concurrent institutional systems for waste management in European countries: a public service, organized as a legal monopoly, operating at a municipality level, responsible for household waste and urban waste from small producers (that we will generically name urban waste); and a market regime managing the remaining commercial and business waste, under the application of the extended producer responsibility (as defined in the Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008, on waste and repealing certain Directives).

16 Throughout this article urban waste includes household waste, urban orphan waste and urban waste from small producers The Portuguese legal framework for waste management distinguishes between urban waste from small producers and from large producers. The former is considered to be waste produced by private or commercial firms with the same characteristics as household waste, i.e. not exceeding 1100 Litres daily (Decree-Law no. 178/2006, article 5(2) and Decree-Law no. 96/2014, article 1, o)).

17 Portuguese Constitution of 1976, article 86(3). The original drafting of this provision, adopted in the wake of the 1974 revolution and the nationalizations that took place in 1974 and 1975, imposed on legislative bodies the duty to provide for such exclusion. Following the 1989 constitutional amendment, the legislator may exclude such sectors but is no longer required to do so.

serving two or more municipalities requiring a predominantly State-funded investment for reasons of national interest). Until 2013, multi-municipal concessions could only be awarded to public-sector-controlled entities. Private enterprise was admitted at municipal level but only following the award of a public service concession.

Given the envisaged privatization of the State holding company EGF[18], with its controlling stake in 11 of the 12 multi-municipal waste management system concessionaires, the law was changed in 2013 to allow the grant of concessions to privately-controlled entities (Law no. 35/2013). Thus, access to private enterprises is currently limited only with regard to water collection and supply and wastewater management services. The exclusion is not complete, however, as the 2013 law allows the concessionaire to grant sub-concessions, in part or in full, to private entities (new Article 1(6) Law no. 88-A/97).

Following this partial liberalization, distinct management models were introduced by Decree-Law no. 92/2013, adapting the legal framework for multi-municipal systems of water, wastewater management and waste management to the new rules. With this new legal framework, the exclusive rights for water collection, treatment and distribution as well as wastewater collection, treatment and disposal in a multi-municipal system are either directly held by the State or attributed to a public-sector-controlled firm under a concession contract (with the possibility of sub-concessions being granted to private sector entities). Exclusive rights for urban waste management in multi-municipal systems can be awarded under a concession contract to privately-controlled enterprises. This allowed the privatization of the concessionaires of urban waste management multi-municipal systems, through long-run concessions, thus establishing distinct roles to be played by the State, as the entity responsible for the public service, and the concessionaire providing the service.

Concessionaires of water, wastewater, and urban waste management multi-municipal systems may be allowed to extend their operation beyond the scope of the concession contract to complementary and ancillary activities, provided this does not conflict with the provision of the public service awarded by concession, that it does not distort competition and that the concession services maintain separate accounting (Article 5(2) Decree-Law no. 92/2013). The same

18 EGF (Empresa Geral do Fomento, S.A.), "is Águas de Portugal Group's sub-holding company responsible for guaranteeing the treatment and recovery of waste within a framework of environmental and economical sustainability and contributing towards raising the quality of life and the environment" (http://www.egf.pt/?lang=en).

provision sets out examples of such activities, namely the use of infrastructure to exploit energy-generating potential and waste preparation for recycling and recovery. This possibility is, however, subject to governmental authorization following a non-binding opinion by the Portuguese Competition Authority (PCA).

In view of the envisaged privatization of EGF, Decree-Law no. 96/2014 established specific rules for multi-municipal waste management systems awarded to private-sector entities and set the uniform terms for those new concession contracts. Regarding the authorization to undertake complementary and other activities, Decree-Law no. 96/2014 requires a non-binding opinion from the Regulator for Water and Waste Services (ERSAR – *Entidade Reguladora dos Serviços de Águas e Resíduos)*, in addition to the opinion of the PCA.

Decree-Law no. 96/2014 also provides an important clarification to the meaning of "complementary" and "auxiliary" activities, albeit formally limited to the concession of the multi-municipal waste management systems awarded to private firms: "complementary activities" are those not included in the core activity of the concession that use the existing infrastructure, in view of maximizing its profitability; "other activities" (which seem to be correlated with the concept of auxiliary activities) are those that the concessionaire is licensed to perform that are not related to its primary activities.

THE VALUE CHAIN FOR WATER AND WASTE MANAGEMENT

To understand the possible impact of an extension of the concessionaire's activity on competition, it is essential to have a prior understanding of the structure and competitive pressures of the value chain supporting these services.

The services of a general economic interest related to water, wastewater and waste management are organized in a value chain with two vertically related primary activities[19], a distribution network serving users/consumers, and a bulk service consisting of the infrastructure supporting that network, that relates to other support activities. The two primary activities are fundamental for the provision of the public service and are the object of the exclusive right of concessionaires.

In water supply, the bulk operations encompass the collection, treatment and storage of water and the distribution operations relate to the downstream

19 On the concept on industry value chain, the vertical relation between operations and support activities view Porter, 1985: Ch. 1.

networks that deliver the water to end users and consumer households (Cave and Wright, 2010). Regarding wastewater management the distribution network is the drainage system that is connected to the bulk sewage system and to the systems for wastewater treatment, storage and disposal. Finally, for waste management the upstream activities are the collection of undifferentiated or sorted waste, and the downstream activities are the bulk services of transport, selection, disposal or recovery.[20]

As already mentioned, all the bulk and distribution systems for households and urban services are supplied under a public concession granting exclusive rights. This means that concessionaires operate in a market under a legal monopoly, i.e., without competitive pressure, usually subject to sector regulation. There are different arguments to support a legal monopoly as discussed in the literature on the economics of regulation[21]. It may be a response: to "market failures" related to the existence of scale or network economies or asymmetric information (Braeutigam, R., 1989); and/or to the need to ensure the provision of a service of general economic interest (Noll, R., 1989 and Armstrong, M. and Sappington, D., 2007), observing principles of universality and non-discrimination. In the case urban water and waste services, their provision must also comply with the Portuguese and European environmental objectives and quality of service requirements.

The undertakings that benefit from the exclusive right are under the obligation to make available (i.e., invest in) and to manage the infrastructure and all the equipment necessary to ensure the supply of those services at the level set by the concession contract. These firms, whether in the public-sector or in the private-sector, operate with the objective of being effective in complying with their contractual duties, of providing efficient management of their assets, in particular, the infrastructure and of achieving financial stability.

In sum, the bulk and distribution activities in water and waste management are part of a larger value chain that includes principal activities and other support activities that may be horizontally or vertically related. The concessionaire holds an exclusive right in part of these operations while maintaining horizontal and vertical relations with other firms operating in markets open

20 For further and more detailed description of the value chains for water, wastewater and waste sectors view Baptista, 2014.

21 For a revision see Baldwin, R. et al, 2012.

to competition[22]. It is important to notice that in these relationships, the firm benefiting from the exclusive right may act as a monopolist, when it offers the service covered by the legal exclusive, but it may also act as a monopsonist as it may be the only firm requiring specific services or goods (Massarutto, 2007).

In its effort to attain economic efficiency and financial stability, concessionaires may consider substituting the vertical and horizontal relations in the market for the possibility of expanding their activities into those services. With this decision to expand, they will alter the market competitive structures within the value chain, and in other related operations specially, if they are able to leverage their market power onto the competitive markets.

In particular there may be two consequences on the market competitive structure. On one hand, if a concessionaire expands its activity into an operation that is within the value chain and is open to private initiative and competition, it may use its market power in the protected market to exclude other competitors from the competitive market (what the EAGCP Report, 2005, classifies as exclusion within the market). This effect will be more probable and more severe the stronger the firms' position in the market and, especially, if the firm has a monopsonist or a monopolist position with the possibility of acting as bottleneck (Rey, P. and Tirole, J., 2007). For example, if the firm is the only one delivering an intermediate good (i.e., its collects a specific waste for recycling or for energy evaluation) and decides to vertically integrate a further activity for transformation, it is possible that it will have an advantage vis-à-vis its competitors (former clients) possibly leading to the foreclosure of the related market.

On the other hand, if the concessionaire decides to expand its activity to a related market, it could leverage the existing dominant position in the market where it has an exclusive right into the new activity (what the EAGCP Report, 2005, classifies as exclusion in an adjacent market). It may use, for example, the existing equipment or infrastructure, financed with investments in the protected market, to gain a favourable position in the competitive market or it may cross-subsidize the operation in the competitive market with gains from the protected market or even transfer costs from one operation to the other.[23]

22 For example, in waste management the firm managing urban waste may outsource transportation services while remaining responsible for the waste until it is transferred to a recycling facility (as is the case where sorted waste is sold for recovery).

23 The possibility of expanding the activity to a related market, open to competition, while using the existing infra-structure, may create a distortion on the decision to invest. If a firm that has the responsibility

From these cases, it becomes clear that when a firm that benefits from an exclusive right, as is the case of a water, wastewater or waste management services concessionaire in Portugal, decides to extend its activity to new markets, this might have an impact on the competitive structure. Nevertheless, this does not necessarily entail that the activity expansion by the concessionaire will have a negative impact on social welfare, only there might be an impact on competition within the protected markets or in adjacent markets. This is a theme subject to ample discussion in economic literature on the social costs and benefits of market foreclosure.[24]

On the side of possible negative impacts, there is the classical argument that associates an increase in market power with allocative, productive and dynamics inefficiencies.[25] From the consumer's point of view, this implies facing a narrower supply in the new market, with higher prices, less quality and less innovation as a consequence of the decrease in competitive pressure.[26]

From a more favourable perspective, reminiscent of the Chicago School critique on vertical integration (Bork, R, 1978 and Posner, R. 1976), the integration of different activities in the same undertaking holding a dominant position in a related market could increase efficiency if, e.g., there are gains to be made with economies of scale and scope or the introduction of new technologies, and savings to benefit from if there are transaction costs that are avoided or an increase in the vertical information that relates the final consumer to the producer, preventing double marginalization or allowing for a more correct estimation of the market demand (Rey, P, and Tirole, J., 2007; Joskow, P., 2008 and EAGCP Report, 2005,)

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to invest in a infra-structure that will be used in a protected market knows that it will be acceptable for it to latter expand its activity to an open market using the same infra-structure it may over invest in the first moment on the perspective of later gains. This argument comes close to what is known in the literature as the Averch-Johnson effect (Averch & Johnson, 1962)

24 For a discussion on the effects on welfare when a firm that is a regulated monopoly expand its activity in to a deregulated market see Vickers, 1995. As Vickers explains, the question that is raised in that situation is not the same as the one addressed in the literature on vertical integration. Nevertheless, the literature on vertical integration explores a number of important issues that are relevant to "the general question at hand, including economies of scope and vertical externalities, variable proportions in production, possibilities for price discrimination and monopolistic competition between differentiated products." (Vickers, 1995: 2)

25 For a revision of the arguments see, e.g., EAGCP Report, 2005; Cabral, 2000: chap 2 and 9; and European Commission, 2009. On the allocative inefficiencies see also the seminal article by Harberger, 1954.

26 There is also a well-known phenomenon in legal and economic literature on regulated markets where a regulated-firm subject to price-regulation is able to evade regulation by acquiring and exercising market power in a vertically-related market (rate-regulation evasion) (USA DOJ, 1982 Merger Guidelines, available in https://www.justice.gov/archives/atr/1982-merger-guidelines).

A final extreme case should be considered. It might happen that the concessionaire intends to expand, or is asked by the market to extend its activity to a related market outside of its concession and open to private initiative where no alternative suppliers exist. This may happen because the local market doesn't create enough scale even though service has to be offered for social or environmental reasons. As the market is legally opened to competition, central or local governments may be hesitant in contracting the provision of these services on an exclusive basis and instead rely on the expansion by the concessionaire. In the case the concessionaire enters the competitive market, there will be a first-mover with the capacity to create entry barriers that will reduce incentives for new entrants should market conditions change and allow competition to take place.

THE IMPACT OF AN EXTENSION ON AN EXCLUSIVE RIGHT ON COMPETITION

From a competition law perspective, the risk of foreclosure is higher when the expanding firm enjoys a dominant position. A dominant position is defined in the ECJ's case law as "a position of economic strength enjoyed by an undertaking, which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of the consumers. Such a position does not preclude some competition, which it does where there is a monopoly or quasi-monopoly, but enables the undertaking, which profits by it, if not to determine, at least to have an appreciable influence on the conditions under which that competition will develop, and in any case to act largely in disregard of it so long as such conduct does not operate to its detriment" (ECJ 1979, paragraph 38).

The delimitation of the relevant market is a precondition to determine whether a given firm holds a dominant position and, therefore, to subject its conduct is to article 102 TFEU[27] (abuse of dominance).[28]

27 TFEU – Treaty on the Functioning of the European Union. For the main provisions regarding the European Competition law in the TFEU see: http://ec.europa.eu/competition/antitrust/legislation/legislation.html. For a discussion on the application of the competition Law, and in particular article 102, to utilities see Williams, 2004.

28 This corresponds to article 11 of the Portuguese Competition Act – Law no. 19/2012. In this paper we will only refer to Article 102 TFEU but most of what will be said in this regard also applies under the Portuguese competition regime.

Due to its importance, the CIA analysis starts with the identification of the relevant markets that may be affected by the public decision. In the case under analysis, this entails ascertaining whether the different activities related to water, wastewater and waste management could be identified as relevant product markets and establishing the geographical borders of those markets (i.e. regional or national). A good starting point for this exercise is the position of the European Commission Directorate General for Competition ("DG Comp") regarding the relevant markets for packaging waste. DG Comp has classified each activity in the value chain for packaging waste management as a relevant market, at regional or national level, leaving open the possibility of a further division taking into account different types of waste and users (European Commission, 2005). It is in the context of the relevant market that dominance is then assessed.

The assessment of dominance may not be as problematic as it would seem as there is support in the case-law of the European Court of Justice (ECJ) for the proposition that a firm holding an exclusive right in a given economic activity is to be considered as holding a dominant position in a substantial part of the internal market. In *Dusseldorp* the ECJ held that "[t]he grant of exclusive rights for the incineration of dangerous waste on the territory of a Member State as a whole must be regarded as conferring on the undertaking concerned a dominant position in a substantial part of the common market" (ECJ 1998, paragraph 60). [29]

It should be noted that merely holding a dominant position is not tantamount to an infringement of article 102 TFEU. According to long-standing case-law, "a finding that an undertaking has a dominant position is not in itself a recrimination but simply means that, irrespective of the reasons for which it has such a dominant position, the undertaking concerned has a special responsibility not to allow its conduct to impair genuine undistorted competition on the common market". (ECJ 1983, paragraph 57)

For conduct by a dominant undertaking to run afoul of article 102 TFEU it is therefore necessary that it constitutes an abuse of said dominant position. In the Hoffmann-La Roche case, where this pharmaceutical company was considered to be dominant in the markets for different vitamins for industry use and human consumption and to have abused that position by entering

29 This statement is consistent with earlier case-law. See, (ECJ 1991a paragraph 28, 1991b paragraph 31, 1991c paragraph 14, 1991d paragraph 17).

into exclusive purchase agreements with its clients as well as by granting rebates conditional on the client obtaining most or all its requirements from Hoffmann-La Roche, the European Court of Justice delineated concept of abuse of a dominant position, as a behaviour "which, through recourse to methods different from those which condition normal competition in products or services on the basis of the transactions of commercial operators, has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition". (ECJ 1979, paragraph 91)

Article 102 TFEU addresses two broad categories of abusive behaviour by dominant firms: (i) exploitative abuses, whereby a dominant firm takes advantage of its economic power so as to obtain benefits that it could not obtain in conditions of normal, reasonable and effective competition, at the expense of the interests of customers or consumers or (in the case of one or more dominant buyers) of suppliers (e.g. by charging excessively high prices) (Temple Lang, 1979); and (ii) exclusionary abuses, when a dominant firm excludes its competitors by means other than competing on the merits of the products or services they provide, e.g. by raising barriers to entry and expansion in the market or by artificially distorting conditions of access to or to compete in the market, altering, as a consequence, the competitive process (European Commission 2009, paragraph 6).

With the guidance paper on the enforcement priorities in applying the article 82 of the EC Treaty (102 TFEU) to abusive exclusionary conduct by dominant undertakings, the European Commission places a special attention to the second type of abuse. The European Commission's aim in focusing enforcement on exclusionary conduct "is to ensure that dominant undertakings do not impair effective competition by foreclosing their competitors in an anti-competitive way, thus having an adverse impact on consumer welfare, whether in the form of higher price levels than would have otherwise prevailed or in some other form such as limiting quality or reducing consumer choice." (European Commission 2009, paragraph 19)

The *Guidance on exclusionary conduct* describes the most common categories of exclusionary practices. Some of these examples are helpful in understanding the possible competitive impact of an expansion to a neighbouring market by a firm that holds an exclusive right in some operations of a value chain for water, wastewater and waste management.[30]

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30 For a general discussion of exclusionary conduct see Bishop and Walker, 2010; EAGCP Report, 2005.

A first example of exclusionary conduct that is relevant is predation[31]. By engaging in predatory conduct, the dominant firm incurs losses or foregoes profits in the short-term (amounting to a sacrifice consisting of financial losses of forgone profits, from a short-term profit-maximizing perspective) so as to foreclose, or be likely to foreclose, one or more of its actual or potential competitors with the aim of strengthening or maintaining its dominant position, thereby causing consumer harm (European Commission 2009, paragraph 63). In the scenario where an *ex ante* CIA may be required, this practice can be associated with the leveraging of a dominant position from the legally protected market to the competitive market. This leveraging effort can be executed in different ways. On one hand, the firm that benefits from the legal monopoly in one market might uses the monopoly rents or a more stable financial situation to practice prices in the competitive markets that are below the operation costs in that market, allowing for cross-subsidization.[32] Another possibility is for the firm to (over)allocate the investment cost for equipment and infrastructure or any common costs to the protected market, so that it can artificially offer better prices and/or quality in the competitive market that could not be replicated by an equally efficient competitor.[33]

A second relevant example is the case of exclusionary conduct by input foreclosure or by refusing to supply or to give access to an infrastructure (Vickers, 1995, Hart et *al.*, 1990, Rey and Tirole, 2007). This anticompetitive conduct may happen when the concessionaire expands into a vertically related, upstream or downstream, market where it also acts has a supplier or a consumer. In this situation if it refuses to negotiate (to buy, sell or give access to the infrastructure covered by the exclusive right) with other competitors

31 For a general discussion on predation see, European Commission, 2009 (paragraph 63), OECD, 2005; Areeda and Turner, 1975; Ordover and Willig, 1981; Bolton *et al.,* 2000; Moura e Silva, 2009 and 2010.

32 The concept of sacrifice is met not only where the firm prices below average avoidable cost but also where "the allegedly predatory conduct led in the short term to revenues lower than could have been expected from a reasonable alternative conduct", in the sense that the firm could have avoided a loss." (European Commission, 2009, paragraph 65).

33 These risks are expressly addressed by the European Commission when it states that: "The Commission may also pursue predatory practices by dominant undertakings on secondary markets on which they are not yet dominant. In particular, the Commission will be more likely to find such an abuse in sectors where activities are protected by a legal monopoly. While the dominant undertaking does not need to engage in predatory conduct to protect its dominant position in the market protected by legal monopoly, it may use the profits gained in the monopoly market to cross-subsidize its activities in another market and thereby threaten to eliminate effective competition in that other market." (European Commission, 2009, paragraph 63, footnote 2).

in the new market, it may incur in an anticompetitive exclusionary conduct. The likelihood of market foreclosure will be higher if the concessionaire acts as a monopolist or a monopsonist in the vertical relation.

A third example relates to exclusionary conduct by tying or bundling of services (Rey & Tirole, 2007; Tirole, 2005). In both cases the dominant firm may tie-in the supply of the service in the protected market with the provision of a service in the new market. In the case of tying, the consumer buying the tying service (sold under protection of a legal monopoly) is also required to buy the service in the new market. In the case of bundling the two services are only sold together. The firm may also adopt a mixed bundling strategy where the acquisition of the bundle is made more attractive through a discount strategy. By resorting to these practices, the firm holding a dominant position in a protected market may leverage that position into markets open to competition.

A fourth and final example of market foreclosure within this analytical framework is the use of loyalty contracts (exclusive dealing and/or loyalty rebates) that may constitute a barrier to entry in to the competitive market. As mentioned above, this conduct may occur when a firm expands its activity to a market that is open to private initiative, but where there is no private interest in offering the service (this may happen in local markets, e.g. due to insufficient scale). In this situation, the activity expansion from the protected market to the new market may even be a response to a public necessity, although it is outside the scope of the exclusive right, and the provision of this service may only be possible through the use of existing infrastructure or equipment or cross-subsidization. In this situation, and when there is a public policy commitment to maintain the market open to private initiative, it is important to ensure that there is no reinforcement or creation of barriers to entry through the use of loyalty contracts, i.e., it is crucial to guarantee that the firm holding an exclusive right in the primary activity does not adopt conduct that could threaten the contestability of the neighbouring market (Baumol, 1982).

Finally, it should be noted that a dominant firm whose behaviour is likely to fall under Article 102 TFEU may provide an objective justification for its conduct, e.g., by demonstrating that the exclusionary effects are outweighed by efficiency gains benefitting consumers (ECJ 2012, paragraph 42).

In conclusion, firms holding a concession in water, wastewater and urban waste management may be considered, in line with the ECJ's case-law, as having a dominant position in that market (or markets, depending on the concrete

findings of market definition in the product and geographical dimensions). The legal monopoly in the protected market confers on the dominant firm a structural advantage when competing in a downstream market (ECJ 2015, paragraph 39). When these firms expand their activity to a related market, they are subject to what the ECJ defines as a "special responsibility not to allow its conduct to impair genuine undistorted competition on the common market" (ECJ 1983, paragraph 57). Thus, in granting an authorisation for a concessionaire to expand to a neighbouring market, public authorities should be mindful of the potential impact on competition and impose *ex ante* conditions that minimize possible distortions on competition therein.

PUBLIC POLICY MEASURES AND THE DUTY OF EU MEMBER STATES NOT TO DISTORT COMPETITION

Although article 102 TFEU prohibits abuses of dominance by undertakings, this provision is also relevant to assess the legality of public policy measures adopted by a member State, given that article 106(1) TFEU requires that "[i]n the case of public undertakings and undertakings to which Member States grant special or exclusive rights, Member States shall neither enact nor maintain in force any measure contrary to the rules contained in the Treaties, in particular to those rules provided for in Article 18 and Articles 101 to 109."

Article 106(1) TFEU is to be read in conjunction with articles 101 and/or 102, together with Article 4(3) of the Treaty on European Union (TEU). Whereas Article 102 deals with the unilateral conduct of dominant undertakings, Article 101 deals with collusive conduct (agreements and concerted practices between undertakings and decisions of associations of undertakings) that has the object or effect of restricting competition and that affects trade between Member States. Article 4(3) TEU imposes on Member States the duty to refrain from any measure which could jeopardize the attainment of the Union's objectives, which include the establishment of the internal market (article 3(3) TEU). In accordance with Protocol no. 27 on the internal market and competition, the internal market "includes a system ensuring that competition is not distorted", which encompasses the Treaty rules on competition. It follows that the EU Treaties impose on member States the duty not to enact or maintain measures that may deprive the competition rules set in articles 101 and 102 TFEU of their effectiveness ("*effet utile*").

Thus, where a member State grants an exclusive right to an undertaking, that act being a measure of public policy, the ECJ will review whether such

measure breaches the obligations arising from the combined provisions of article 106(1) and 102 TFEU.

As the ECJ recently held in the *DEI* case, regarding the grant by the Greek government to the state-owned incumbent electricity producer of exclusive rights to mine for lignite, the most attractive fuel used to generate electricity in Greece: "(…) a Member State is in breach of the prohibitions laid down by Article 86(1) EC [the former Treaty establishing the European Community, now Article 106(1) TFEU] in conjunction with Article 82 EC [now Article 102 TFEU] if it adopts any law, regulation or administrative provision that creates a situation in which a public undertaking or an undertaking on which it has conferred special or exclusive rights, merely by exercising the preferential rights conferred upon it, is led to abuse its dominant position or when those rights are liable to create a situation in which that undertaking is led to commit such abuses (…)". (ECJ 2014, paragraph 40)

One remarkable clarification brought about by the ECJ in this case is the fact that for the grant of an exclusive right to be in breach of article 106(1) in conjunction with article 102 TFEU, "it is not necessary that any abuse should actually occur". This means that no actual market conduct that qualifies as an abuse is required where a public policy measure creates the *risk* of an abuse of dominance.

The ECJ justifies this ruling based on the foundational role of competition within the internal market, arguing that "a system of undistorted competition, such as that provided for by the Treaty, can be guaranteed only if equality of opportunity is secured as between the various economic operators" (ECJ 2014, paragraph 41). Measures adopted by member States which create an "inequality of opportunity between economic operators" are therefore in breach of article 106(1) in conjunction with article 102 TFEU. In the context of the enforcement of these Treaty provisions, the EU Commission is only required "to identify a potential or actual anti-competitive consequence liable to result from the State measure at issue".

In sum, under the ECJ's case law, State measures will be in breach of the EU Treaties where they:

> "(…) affect the structure of the market by creating unequal conditions of competition between companies, by allowing the public undertaking or the undertaking which was granted special or exclusive rights to maintain (for example by hindering new entrants to the market), strengthen or extend its dominant

position over another market, thereby restricting competition, without it being necessary to prove the existence of actual abuse". (ECJ 2014, paragraph 46)

In the case of the authorization to expand the activity within the water, wastewater and waste management services, the public decision impacts on the relationship between bulk, downstream services and other support activities. Bearing in mind the examples that were discussed on the previous section, there is the possibility for this authorization to create unequal conditions of competition between companies.

For example, consider the authorization to enter the downstream markets where the undertaking holding an exclusive right upstream (the concessionaire) will be competing against other firms that may be, at the same time, vertically-related clients/suppliers . This underscores the relevance of the ECJ long-established principle according to which, where a firm that is dominant on a market in raw materials refuses to supply a customer producing derivatives with the objective of reserving the downstream market to itself and with the possibility of eliminating all competition downstream, such conduct is an abuse of dominant position within the meaning of article 102 TFEU (ECJ 1985, paragraph 25).

The same principle applies where the extension of a dominant position is the result of a State measure and has the potential to eliminate competition in the new market:

> "(…) the extension of a dominant position, without any objective justification, is prohibited 'as such' by Article 86(1) EC in conjunction with Article 82 EC, where that extension results from a State measure. As competition may not be eliminated in that manner, it may not be distorted either (…)". (ECJ 2014, paragraph 67)

At this point it is crucial to clarify that the ECJ's case law does not preclude a dominant firm enjoying an exclusive right in an upstream market from extending its activity to a vertically-related neighbouring market where it will not benefit of exclusive or special rights. However, where such extension is the result of a State measure, it is essential that the authorization is subject to conditions that ensure that there is no risk that competition in that neighbouring market is distorted by unequal conditions of competition between firms.

This is in fact the position of the EU Commission in the context of the liberalization of the postal sector, where it has held that strategic considerations,

such as the will to enter into a new market, and synergies between the incumbent firm holding an exclusive right in the upstream market and its subsidiary operating in a vertically-related market that has been liberalized, cannot be ignored (European Commission 1997). The General Court (GC) has adhered to the Commission's view, while referring to article 345 TFEU:

> "To require that the remuneration which a public undertaking with a monopoly receives in return for the provision of commercial and logistical assistance to its subsidiary should correspond to the payment which would have been demanded under normal market conditions, does not prohibit such a public undertaking from entering an open market but subjects it to the rules of competition, as the fundamental principles of Community law require. Such a requirement does not adversely affect the system of public ownership and merely ensures that public and private ownership are treated equally". (GC 2000, paragraph 77)[34]

Thus, the GC accepted the Commission's view that the payment by the downstream subsidiary for the inputs provided by the upstream firm should be determined in normal market conditions. This entails that the price charged on the downstream market by the integrated firm covers all the incremental costs incurred in providing complementary or auxiliary activities, an appropriate contribution to the fixed costs arising from use of the upstream infrastructure and an adequate return on the capital investment in so far as it is used for the downstream activities.

THE COMPETITION IMPACT ASSESSMENT METHODOLOGY

Differently from its role as a public enforcer of competition rules, the PCA's competition impact analysis is not an *ex post* assessment of the legality of the conduct of one or more firms. Since the PCA is required to issue an opinion before such complementary or auxiliary activities are actually exercised, there is in fact no actual conduct on the market by the holder of an exclusive right. The PCA is therefore required to evaluate the impact of the authorization on competition in neighbouring markets before any evidence can be collected on its actual effects on the market.

A word of caution is, however, in order. If following an authorization, evidence is found that the conduct of the firm that holds an exclusive right is

34 This judgment was annulled by the ECJ on appeal on unrelated grounds.

in breach of competition rules, the PCA or the European Commission may still enforce those rules against the firm, namely Article 102 TFEU. In other words, the existence of this *ex ante* appraisal in no way undermines the *ex post* applicability of competition rules to actual conduct on the market by the holder of an exclusive right (or by any other undertaking operating in neighbouring markets, for that matter).

Given this strict focus of the *ex ante* analysis on the *likely* competitive impact of the decision to authorize the extension of activities, there is a close affinity with the CIA of a public intervention.

Furthermore, given the need to balance the pursuit of public policy goals with the possibility of anticompetitive impacts on the affected markets, the analytical methodology required by such an evaluation also presents similarities with the approach developed by the European Commission and EU courts regarding Article 106(1) TFEU in conjunction with Article 102 TFEU examined in the previous section.

In conducting a CIA one must keep in mind that the public authority deciding whether or not to grant the authorisation, i.e. the Government, is itself pursuing a public interest, in this case one relating to the provision of public services or services of a general economic interest. In that sense there could be other public interest dimensions to the decision other than the public interest of preserving competition that is within the province of the PCA. A competitive market should be valued as a public good, in the sense that it promotes economic development and social well-being, but there are other public interests to consider. Ultimately it will be for the Government to balance the public interests at stake, not the PCA. The institutional role of the PCA in this framework is one of contributing to a better informed public decision, by pointing to possible anticompetitive impacts and devising how such impacts can be minimized or even avoided.

As referred to in the introduction, this *ex ante* evaluation follows the three--step methodology of a CIA. The first step implies the characterization of the markets where the relevant activities are conducted to understand the economic linkages between the protected activity and the complementary or auxiliary activity, as well as the competitive structure of those markets. The second step identifies possible competitive impacts using as a guideline the OECD competition assessment toolkit (OECD, 2011, Vol. 1 and Vol. 2) and the theoretical and legal background on anti-competitive conducts analyses. The third step concludes the analysis by presenting the PCA's view on the

competition impact of the envisaged activity extension in that framework, engages in a proportionality test in the lines discussed above of the EU case-law under Article 106(1) TFEU, combined with Article 102 TFEU, and presents possible remedies or alternatives that may be less stringent on competition.

The first stage was already discussed in section 5 of this article. As mentioned above, the DG Comp practice on the competition analyses in the waste sector proposes that each activity in the value chain may be considered as a relevant market. Furthermore, the EU case law supports the general finding that a firm holding an exclusive right in a given economic activity is considered as holding a dominant position in a substantial part of the internal market.

On the second stage, the PCA seeks to identify the type of competitive impact that might happen considering the OECD Checklist for the assessment of public decisions (see OECD, 2011, Vol. 1) and applying the abuse of dominance framework presented in sections 5 above.

According to the OECD methodology, where a measure granting the authorization creates the conditions for exclusionary conduct it will limit the ability of existing suppliers in the competitive market to provide a service and, therefore, it will limit their capacity to compete. In a sense, the public authorization could *de facto* expand the influence of the exclusive right, reducing the number and range of suppliers in the market and/or the capacity for existing undertakings to compete (in the OECD checklist, this represents a limitation on the number or range of suppliers and on the ability of suppliers to compete). The consequence will be a decline in the diversity of suppliers and a reduction of market rivalry with a potential negative effect in the competition decision variables such as price, quality diversity and innovation.

This effect may have dynamic consequences where the firm intends to extend its activity to a market that is legally open to competition but where no alternative suppliers have emerged to date. In this case the extension could be justified with the aim of supplying a service essential to the fulfilment of the public service task that it is entrusted with.

Given that at the time the assessment is conducted there is no actual conduct on the market and that the PCA does not have the power to enforce Article 106(1) TFEU, there are no grounds to oppose expansion *per se*, from a strict competition law perspective. The role of the PCA in conducting a CIA is thus one of using its experience to devise remedies that may reduce the likelihood that such anticompetitive conduct may take place afterwards.

Ex post conduct amounting to an abuse of dominant position could lead to a prohibition decision by the PCA accompanied by sanctions (fines). But in fact, by intervening *ex ante* the PCA may enhance the deterrence of *ex post* competition enforcement by fashioning remedies that increase the transparency with which the integrated firm will operate in the different related markets. This provides the *ex ante* analysis with a valid purpose once there is a holistic view of the overall range of competition law instruments available.

Thus, the final stage of the CIA consists of recommending that the authorization be subject to conditions addressing anticompetitive risks in the competitive market to mitigate possible negative impacts on competition. Given the concerns identified in section 5, the PCA typically recommends that the following conditions be attached to the authorization:

(1) Accounting and financial separation between the protected activity and the new activity, to ensure the possibility of ascertaining the financial sustainability of each activity through the analysis of each activities' costs and revenues.
(2) Periodical demonstration of the economic and financial sustainability of the new activity taking as a benchmark that the price charged for the new service should cover all the additional costs incurred in providing it, including an appropriate contribution to the fixed costs arising from use of the common infrastructure or equipment and an adequate return on the capital invested (ECJ 2003).
(3) Adoption of behavioural requirements that prevent anticompetitive conduct that could lead to market foreclosure or to the creation of barriers to entry and to expansion in the new market (e.g. loyalty contracts with clients in the new market, tying/bundling of services, predatory pricing).

The rationale behind these conditions is to address *ex ante* possible anticompetitive risks arising from future conduct on the market by the firm holding an exclusive right thus reducing the likely anticompetitive impact of the authorization as a public measure. This ensures the necessary reconciliation between the public interest in the efficient use of infrastructure and the economic and financial sustainability of the water, wastewater and waste management systems with the protection of competition in downstream markets as a public good.

CONCLUSIONS

Concessionaires of water, wastewater, and urban waste management multi--municipal systems hold exclusive rights in their respective primary activities covered by concession contracts. Under the Portuguese legal framework, they may be allowed to extend their activity beyond the scope of the concession contract to complementary and ancillary activities, provided this does not conflict with the provision of the public service awarded by concession and that the exercise of those activities does not distort competition as well as that the concession services maintain separate accounting. This possibility is, however, dependent on a governmental authorization that should be preceded by a non-binding opinion of Portuguese Competition Authority (PCA), and in the case of privately-controlled concessionaires in the waste management sector, also by an opinion by the sector regulator.

From a competition law perspective, a firm that holds an exclusive right in a given economic activity is considered as holding a dominant position in a substantial part of the internal market. This entails that its conduct is subject to Article 102 TFEU prohibition of abuse of dominance. The extension of its activity to a related market may lead to the firm adopting conduct that harms competition in the downstream market and thus may be caught by the prohibition of abuse of dominance. As was shown in section 5, the main categories of possible abusive behaviour in a downstream market by a firm holding a dominant position in a protected market are well-known in competition law: predation, input foreclosure, tying/bundling and loyalty contracts.

As a matter of principle, such abusive behaviour leads to *ex post* enforcement of competition rules. However, when asked to give an opinion on the authorization of the extension of activity, the PCA is being required to make an *ex ante* appraisal, as no conduct will actually take place before the authorization is granted. Furthermore, since what is at stake is a public policy measure (the authorization), the PCA follows the methodology used in a Competition Impact Assessment of a public decision. An important contribution of the methodology developed by the PCA described in this paper is the combination of standard analysis of possible abuses of dominance with an *ex ante* frame of analysis, where no actual market conduct has occurred and the focus is placed on the public measure that may enable such future conduct combining the application of the principle of competitive neutrality with the toolkit for competition impact assessment of public measures.

Another important conclusion of this paper relates to the fact that, in accordance with the ECJ's case law, a dominant firm enjoying an exclusive right

in an upstream market is not legally precluded from extending its activity to a vertically-related neighbouring market where it will not benefit of exclusive or special rights. The unavailability of an extreme option (*ex ante* prohibition of expansion) makes the development of adequate *ex ante* remedies a more pressing concern for public authorities. The methodology developed in this paper contributes to the formulation of such remedies aiming at preserving efficient and competitive markets.

As detailed in Section 7, the role of the PCA in conducting a CIA consists in using its experience in applying competition law and economics concepts, particularly those relating to the anticompetitive risks of the extension of dominance to a market that could work competitively to devise remedies to reduce the likelihood that such anticompetitive conduct may take place once an authorization to expand is granted. Given that the extension of activity is the result of a State measure, it is essential that the authorization be subject to conditions that ensure that there is no risk that competition in that neighbouring market is distorted by unequal conditions of competition between firms. The methodology presented in this paper combines the insights gained from competition law and economic analysis of leveraging of dominance to neighbouring markets with the approach envisaged in the competition impact assessment toolkit to assess public measures and the legal principles emerging from the European Court of Justice case-law under the competition rules of the EU to develop a coherent approach that leads to the design of pragmatic remedies to competitive risks arising from these specific public policy measures.

By preventing the creation of barriers to entry on the market open to competition and inhibiting possible foreclosure practices, this methodology contributes to maintaining the contestability of the new market, while allowing possible efficiency gains from the expansion by the concessionaire holding an exclusive right. Hopefully, adherence to this methodology will also contribute to make public authorities responsible for environment protection and sector regulation as well as stakeholders more aware of the possible competitive risks of expanding the activity of firms holding exclusive rights from their primary market to secondary markets open to competition, thus reinforcing the incentives for compliance with competition rules. Ultimately, as the European Commission has stated, “competition and environmental policies should be implemented in a mutually reinforcing way” in order to promote the goal of making the EU economy dynamic, competitive and sustainable (European Commission, 2005).

REFERENCES

Antonioli, B. & Massarutto A.

2011 "The municipal waste management sector in Europe: shifting boundaries between public service and the market", *CIRIEC Working Paper* no. 2001/07.

Areeda, Phillip & Turner, Donald F.

1975 "Predatory Pricing and Related Practices under Section 2 of the Sherman Act." *Harvard Law Review*, 88(4), pp. 697-733.

Armstrong, Mark & Sappington, David E.M.

2007 "Chapter 27 – Recent Developments in the Theory of Regulation," In Armstrong, Mark (ed.), *Handbook of Industrial Organization*, 1557–700.

Averch, Harvey & Leland, Johnson

1962 "Behavior of the Firm under Regulatory Constraint", *The American Economic Review*, 52(5), pp. 1052-69.

Baldwin, R., Cave, M. & Lodge, M.

2012 *Understanding Regulation: Theory, Strategy, and Practice*, 2nd edition, Oxford: Oxford University Press.

Baptista, J. M.

2014 "The Regulation of Water and Waste Services: An Integrated Approach (model RITA-ERSAR)", edited by the IWA.

Baumol, William J.

1982 "Contestable Markets: An Uprising in the Theory of Industry Structure", *The American Economic Review*, 72(1), pp. 1-15.

Bishop, Simon & Walker, Mike

2010 *The Economics of EC Competition Law: Concepts, Application and Measurement*, 3rd ed., University Edition, Sweet & Maxwell, London.

Bolton, P., Brodley, J. & Riordan, M.

2000 "Predatory Pricing: Strategic Theory and Legal Policy", *Georgetown Law Journal*, 88(8), pp. 2239-2330.

Bork, R.

1978 *Antitrust Paradox*, Basic Books, New York.

Braeutigam, R. R.

1989 "Optimal policies for natural monopolies", in: Schmalense, R. (Ed.). *Handbook of Industrial Organization*, Elsevier, v.2, 1989. chap. 23, p. 1289-1346.

Cabral, Luís

2000 *Introduction to Industrial Organization*, MIT Press, Cambridge, Massachusetts.

CAVE, Martin & WRIGHT, Janet

2010 "A strategy for introducing competition in the water sector", *Utilities Policy*, Volume 18, Issue 3, September 2010, Pages 116-119.

CAPOBIANCO, A. & CHRISTIANSEN, H.

2011 "Competitive Neutrality and State-Owned Enterprises: Challenges and Policy Options", *OECD Corporate Governance Working Papers*, No. 1, OECD Publishing.

CARLTON, Dennis W. & WALDMAN, Michael

2002 "The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries", *RAND Journal of Economics*, 33, pp. 194-220.

DEMSETZ, H.

1968 "Why Regulate Utilities?", *The Journal of Law & Economics*, 11(1), pp. 55--65.

DUNLOP, C. A., MAGGETTI, M., RADAELLI, C. M. & RUSSEL, D.

2012 "The many uses of regulatory impact assessment: A meta-analysis of EU and UK cases", *Regulation & Governance*, 6: 23–45.

EAGCP Report

2005 "An Economic Approach to Article 82 – Report by the European Advisory Group on Competition Policy", *Discussion Paper Series of SFB/TR 15 Governance and the Efficiency of Economic Systems*, Free University of Berlin, Humboldt University of Berlin, University of Bonn, University of Mannheim, University of Munich.

EUROPEAN COMMISSION

1997 EU Commission Decision, October 1, 1997, on state aid granted by France to La Poste's subsidiary SFMI-Chronopost, OJ L 164/37, p. 45.

2005 "DG Competition Paper Concerning Issues of Competition in Waste Management Systems".

2009 "Communication from the Commission – Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings", O.J., C 45, February 2, 2009, p. 7

HART, Oliver, TIROLE, Jean, CARLTON, Dennis W. & WILLIAMSON, Oliver E.

1990 "Vertical Integration and Market Foreclosure", *Brookings Papers on Economic Activity, Microeconomics*, 1990, pp. 205-86.

HARBERGER, A. C.

1954 "Monopoly and Resource Allocation", *The American Economic Review*, v. 44, n. 2, p. 77-87, 1954.

Jacobs, H. Scott

2007 "Current Trends in the Process and Methods of Regulatory Impact Assessment: Mainstreaming RIA into Policy Processes", in Kirkpatrick, Colin & Parker, David (eds.), *Regulatory Impact Assessment: Towards Better Regulation?*, The CRC Series on Competition, Regulation and Development, 2007, Cap. 1.

Joskow, Paul L.

2008 "Vertical Integration," in Ménard, C. S. & Mary, M. (eds.), *Handbook of New Institutional Economics*, 319-48. Springer Berlin Heidelberg.

Kirkpatrick, Colin & Parker, David

2007 "Regulatory Impact Assessment: An Overview", in Kirkpatrick, Colin & Parker, David (eds.), *Regulatory Impact Assessment: Towards Better Regulation?,* The CRC Series on Competition, Regulation and Development, 2007, Cap. 1.

Massarutto, Antonio

2007 "Municipal Waste Management as a Local Utility: Options for Competition in an Environmentally-Regulated Industry", *Utilities Policy*, 15(1), pp. 9-19.

Moura e Silva, Miguel

2009 "Predatory Pricing Under Article 82 and the Recoupment Test: Do Not Go Gentle into that Good Night", *European Competition Law Review*, 30(2), pp. 61-65.

2010 *Abuso de posição dominante na nova economia*, Almedina, Coimbra.

Noll, Roger G.

1989 "Economic Perspectives on the Politics of Regulation," in Schmalense, R. (ed.), *Handbook of Industrial Organization*, 1253-87, Elsevier.

Ordover, Janusz A. & Willig, Robert D.

1981 "An Economic Definition of Predation: Pricing and Product Innovation", *The Yale Law Journal*, 91(1), pp. 8-53.

OECD

2005 "Predatory Foreclosure", Directorate for Financial and Enterprise Affairs Competition Committee, daf/comp(2005)1, 15 march 2005.

2011 (Vol. 1), "Competition Assessment Toolkit: Volume I: Principles"; (Vol. 2), "Competition Assessment Toolkit: Volume I: Volume II: Guidance", www.oecd.org/competition/toolkit.

2012 "Competitive Neutrality: Maintaining a level playing field between public and private business", www.oecd.org/competition/competitiveneutralitymaintainingalevelplayingfieldbetweenpublicandprivatebusiness.htm.

2014 "Experiences with Competition Assessment: Report on the Implementation of the 2009 OECD Recommendation", http://www.oecd.org/daf/competition/Comp-Assessment-ImplementationReport2014.pdf.

OFT

2010 "Competition in mixed markets: ensuring competitive neutrality", OFT1242, OFT working paper.

Porter, Michael E.

1985 *Competitive Advantage*, The Free Press, New York.

Posner, R.

1976 *Antitrust Law*, University of Chicago Press, Chicago.

Rey, Patrick & Tirole, Jean

2007 "A Primer on Foreclosure," in Armstrong, Mark (ed.), *Handbook of Industrial Organization*, 2145–220. Elsevier.

Sierra, José Luis Buendia

2014 "Article 106 – Exclusive or Special Rights and Other Anti-Competitive State Measures", in Faull, John & Nikpay, Ali (eds.), *The EU Law of Competition*, 3rd ed., Oxford, Oxford Univ. Press, pp. 809-879.

Syverson, Chad

2011 "What Determines Productivity", *Journal of Economic Literature*, 49:2, pp. 326-365.

Smith, Adam

1776 "An Inquiry into the Nature and Causes of the Wealth of Nations", in Edwin Cannan, ed. London: Methuen & Co., Ltd. 1904. Library of Economics and Liberty [Online] available from http://www.econlib.org/library/Smith/smWN0.html.

Sokol, D. Daniel

2009 "Limiting Anticompetitive Government Interventions that Benefit Special Interests", 17 *Geo. Mason L. Rev*, p. 119.

Stigler, G. J.

1957 "Perfect Competition, Historically Contemplated", *Journal of Political Economy*, 65, pp. 1-17.

Tirole, J.

2005 "The Analysis of Tying Cases: A Primer", *Competition Policy International (CPI)*, v. 1, n. 1, Apr 01 2005.

UNCTAD

2014 "Competitive neutrality and its application in selected developing countries", UNCTAD Research Partnership Platform Publication Series, Unites Nations.

Vickers, John

1995 "Competition and Regulation in Vertically Related Markets", *The Review of Economic Studies*, 62(1), pp. 1-17.

Viscusi, W. Kip, Harrington JR., Joseph E. & Vernon, John M.

2005 *Economics of Regulation and Antitrust*, 4th ed., MIT Press, Cambridge, Massachusetts.

Whinston, Michael D.

1990 "Tying, Foreclosure, and Exclusion", *American Economic Review*, 80, pp. 837-859.

Williams, Iestyn

2004 "The role of general competition policy standards in utility settings", *Utilities Policy*, Volume 12, Issue 2, June 2004, pp. 87-91.

COURT JUDGEMENTS

ECJ 1979: ECJ judgment of 13 February 1979, Hoffmann-La Roche v. Commission, Case 85/76, ECR (1979) 461

ECJ 1983: ECJ judgment, Michelin v. Commission, case 322/81, ECR (1983) 3461

ECJ 1985: ECJ judgment, CBEM v. CLT and IPB (Télémarketing), case 311/84, ECR (1985) 3261

ECJ 1991a: ECJ judgment, Höffner v. Macroton, case C-41/90, ECR (1991) I-2010.

ECJ 1991b: ECJ judgment, ERT, case C-260/89, ECR (1991) I-2925, paragraph 31;

ECJ 1991c: ECJ judgment of December 10, 1991, Merci convenzionali porto di Genova, case C-179/90, ECR (1991) I-5923.

ECJ 1991d ECJ judgment, GB-Inno-BM, case C-18/88, ECR (1991) I-5973.

ECJ 1998: ECJ judgment, Dusseldorp BV and Others, case C-203/96, ECR (1998) I-4075

ECJ 2003: ECJ Judgment, Chronopost v. Ufex, Joined cases C-83/01 P, C-93/01 P and C-94/01 P.

ECJ 2012: ECJ judgment, Post Danmark I, case C-209/10 (not yet reported).

ECJ 2014: ECJ judgment, Commission v. DEI, case C-552/12 P (not yet reported).

ECJ 2015: ECJ judgment, Post Danmark II, case C-23/14 (not yet reported).

EGC 2000: EGC judgment of December 14, 2000, Ufex v. Commission, case T-613/97, ECR (2000) II-4055.