

Smart Innovation, Systems and Technologies 209

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Advances in Tourism, Technology and Systems

Selected Papers from ICOTTS20, Volume 2

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Elisa Alén González · Juan Carlos Garcia Ojeda
Editors

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Editorial

The International Conference on Tourism, Technologies and Systems is an international forum for researchers and professionals in the tourism sector, which enables the discussion of the latest innovations, trends and concerns in several areas, in the tourism sector, associated with information technologies and systems. It is an event for professionals in the sector, in search of technology solutions, where academics, IT experts and business managers meet to discuss new ideas that help them maximize the potential of tourism business through technology.

The ICOTTS'20 Scientific Committee is composed of a multidisciplinary group of 137 experts who assessed some 190 papers from 28 countries, received for each of the main topics proposed for the conference: a) technology in tourism and tourism experience; b) smart destinations; c) digital marketing applied to tourism and travel; d) mobile technologies applied to sustainable tourism; e) research in the area of tourism to provide innovative solutions to social problems; f) tourism, well-being and hospitality; g) information technologies in tourism; h) digital transformation of tourism business; i) travel for health and well-being; j) information technologies in ecotourism and agrotourism; k) information technologies in food tourism; l) information technologies in education and educational tourism; m) e-tourism and tourism 2.0; n) big data and travel and tourism management; o) robotics in tourism; p) resilience and tourism; q) dark tourism; and r) military tourism.

The papers accepted for presentation and discussion at the conference are published by Springer and will be submitted for indexing by ISI, SCOPUS, EI-Compendex, Google Scholar and SpringerLink.

We thank all those who contributed to the ICOTTS'20 conference (authors, committees, workshop organizers and sponsors). We deeply appreciate your involvement and support, which were crucial to the success of the conference.

October 2020

António Abreu
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Too Many Policy Options, Not Enough Diversity? A Typology of Tourism Policy Tools

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Abstract. The design of a typology of policy tools specifically aimed at tourism policy represents the main goal and the original contribution of this article. Based on the theory of market failures and the tools of government approach, we extend Weimer and Vining's original typology of public policies to the field of tourism by relying on an empirical analysis of tourism policy tools adopted by local governments in Portugal. The results suggest the existence of specific situations requiring the enlargement of Weimer and Vining typology. The ultimate goal is to contribute to research and practice in the field of tourism policy and management by providing both scholars and decision-makers with a policy toolbox, which can be useful to tackle policy problems in tourism markets.

Keywords: Tourism market failures · Typology of tourism policy tools · Local governments

1 Introduction

The evolution of Public Administration, in general, and Public Policy, in particular, has recognized that governments have at their disposal a wide range of policy tools, to design and conduct the provision of public goods and services [1–3]. In this context, the development of the tools approach has enabled the elaboration of several public policy typologies. Typologies of public policies are useful not only because they allow us to understand the politics that underlie these policies [4, 5], but also because they suggest different ways to match policy problems and policy tools.

The typology presented by Weimer and Vining [6] is considered one of the most influential in categorizing government interventions to solve market failures [7]. According to this typology, government intervention becomes a substitute for markets forces when market outcomes are not acceptable from a societal point of view or when they fail to achieve economic efficiency (Pareto optimality). Thus, this typology covers situations where market failures are addressed through government intervention and represents the main economic rationale for public sector involvement in private matters [8, 9]. More specifically, tourism activities occur in a market context and the literature has pointed out that the main justifications for government intervention in the economy apply to tourism markets as well [8, 10, 11].

Prior empirical work has investigated the presence of market failures in the context of tourism by focusing on specific policies to promote economic development [12, 13], to address tourism externalities [14], and to correct distorted spatial patterns of tourism development and activity [15]. This work extends prior research by investigating the adoption of tourism policy tools by Portuguese municipalities experiencing different levels of tourism activity. The paper focuses on two main research questions: 1) Do different levels of tourism activity lead to the adoption of different types of policies adopted in Portuguese municipalities? 2) If so, what types of policies are associated with municipalities with different tourism profiles?

The paper develops a typology of tourism policy tools based on Weimer and Vining's original typology, which is then employed to conduct an empirical analysis of tourism policy tools adopted by local governments in Portugal experiencing different levels of tourism activity (international, national or regional/local). The ultimate goal is to contribute to research and practice in the field of tourism policy and management by providing both scholars and decision-makers with a policy toolbox, which can be useful to tackle specific policy problems in tourism markets with different profiles.

The paper proceeds as follows. The next section analyses the tourism activity as an imperfect market with a strong presence of public goods, externalities, natural monopolies, and asymmetric information and identifies the main policy tools suggested in the literature to solve specific problems associated with these market failures. The second section introduces a set of hypotheses, derived from the literature, linking different levels of tourism activity to specific policy tools designed to address market failures. Section three presents the context of tourism policies in Portuguese local governments. The fourth section describes the data and methods employed in the empirical analysis conducted in section five. Lastly, a revised typology of tourism policy tools is introduced, followed by the conclusions of our study and the discussion of the implications for tourism policy and development in Portugal and elsewhere.

2 Tourism Market Failures and Public Policy Tools: The Literature

From an economic point of view, the tourism activity can be regarded as an imperfect market, with a strong presence of public goods, externalities, natural monopolies and asymmetric information [16]. Under imperfect market conditions, individual buyers and sellers can influence prices and production, perfect information is not widely available to all agents, and perfect competition is absent. [8] refers to tourism as an economic activity more predisposed to market failures, because it depends on the output of many industries to deliver its own product; typically, this requires some form of public intervention to restore the parameters of competition. The standard reasons for public intervention in the economy are perfectly applicable to tourism activity [10]. The presence of market failures in tourism markets provides legitimacy to government intervention through policy tools capable of correcting these market distortions [16]. The following subsections summarize tourism market failures and present key policy tools employed to solve inefficiencies caused by each of these failures.

2.1 Public Goods

Pure public goods are characterized by non-rivalry of consumption and non-excludability. Tourism promotion, tourism infrastructures, tourism coordination, and tourism planning have often been described as pure public goods [17]. The promotion of national tourism and/or destinations is the most distinct example of a non-rival and non-exclusive good in the tourism market [18]. The financial resources employed to promote a destination will equally benefit all the firms operating in that destination (non-rivalry). Firms tend to minimize their investments in promotion in the expectation that other firms will invest. Any benefits from these investments will be shared by all firms in the tourist destination, a sign of non-excludability [19]. As a result, firms have minimal incentives to pursue such a voluntary pattern of investments [20–22]. Thus, this kind of behaviour produces an inadequate allocation of economic resources, due to underfunding of tourism promotion [23].

In light of this, it seems consensual that tourism promotion requires some form of public intervention, since it is extremely difficult to determine accurately who benefits from tourism promotion [24]. In fact, scientific community recognizes the direct involvement of governments in the provision and funding of tourism promotion [18, 25]. Despite the importance of this direct public intervention, the increase in public budgetary restrictions has led to a set of alternative policy tools to public provision and financing of tourism promotion, namely i) tax levies on businesses; ii) “user pays”/cooperative funding systems; iii) tax on foreign exchange earnings; iv) tax on tourism investment; and v) a commercial bed tax [19, 26]. Nonetheless, several authors continue to advocate that the most appropriated policy tool is direct intervention and public funding of tourism promotion [24].

The provision of tourism infrastructures is another example of a public good [27, 28]. Given the concepts of infrastructure and tourism superstructure [29], it is obvious that they represent an important part of the tourism product and therefore require provision in order to increase the competitiveness of tourist destinations [30]. However, despite the fact that the private sector guarantees the provision of some infrastructures, it has no incentive to provide infrastructures with public good characteristics, particularly those that are non-excludable [17]. In this sense, the efficient level of provision of tourism infrastructures requires some form of government intervention. Several policy tools that can be used, including direct provision, public and private capital co-financing, financial and fiscal incentives, and taxation of tourism infrastructures [31, 32]. Nevertheless, and despite the diversity of these tools, some authors insist that an efficient level of provision of tourism infrastructures can only be reached through direct government intervention [26, 27].

The coordination of tourism activities represents yet another form of public good [17]. Tourism is an extremely complex industry that brings together a wide range of activities and products and involves a large number of public and private actors [32, 33]. Due to this significant fragmentation, it is very common to find coordination problems in tourism activities, which often take place in an unplanned manner and without any institutional arrangement [26]. Although short-term goals in tourism may be attractive, the process of tourism development should result from medium and long-range planning, in order to maximize the potential of investments and avoid possible

negative impacts [26]. Given that the interrelations and interdependencies with various sectors of activity produce a highly fragmented activity, private firms alone cannot secure tourism planning [34]. Planning has the potential to address coordination issues in tourism markets but planning itself displays characteristics of a non-excludable good, incapable of generating profits to private firms [35, 36]. As a result, most literature recognizes the important action of coordination taken up by governments adopting long-term plans exclusively dedicated to tourism [22, 37–39]. Alternatively, others have pointed out the existence of self-organizing, voluntary coordination structures operating closer to market logic [40, 41].

2.2 Externalities

Due to its importance and magnitude, the tourism industry generates a vast number of impacts, which the literature commonly describes as externalities or spillover effects [42, 43]. The external effects of tourism activities can be positive or negative and are usually categorized as economic, socio-cultural or environmental [44]. The external effects caused by tourism activities create differences between the private optimum and the social optimum, thus requiring a policy solution to internalize those effects [45].

In general, two types of policy solutions have been suggested. The first type assumes that governments take on an active role in the market through regulation of the activity or by changing the cost structure through price-based policy mechanisms. Even though regulation constitutes a political action recognized as appropriate by academics and practitioners in the field of tourism policy, the most commonly used policy tool is by far the adoption of taxes or fees to tourism industry and/or visitors, especially in areas where the intensity of tourism activity is more evident [43, 46]. Various authors have pointed out the use of Pigouvian taxes as the most efficient solution to address problems caused by externalities [46, 47]. In contrast, the second set of alternatives supports purely voluntary policy solutions to correct external effects. This group of policy tools is inspired by the Coase Theorem, which argues that in the presence of clearly defined property rights and negligible transactions costs, externalities can be corrected through market mechanisms, i.e., voluntary arrangements between parties involved in the externality [48–50].

2.3 Natural Monopoly

The third tourism market failure discussed in this section is commonly referred to as natural monopoly. Several authors indicate the presence of natural monopolies in the tourism industry, focusing on specific characteristics of tourist attractions, particularly scarcity, uniqueness, immobility, and regional differences [27, 51, 52]. The “iconic” nature of many tourism products, in terms of typology and quality of tourist attractions, suggests the presence of a natural monopoly [53, 54]. There can only be one Parthenon, one Niagara Falls, one London Tower, one Grand Canyon and one Eiffel Tower, which are all described by Veal [51] as social monopolies.

This author emphasizes that leisure organizers can take advantage of natural monopolies due to the unique historical features of such tourist attractions leading to social surplus losses due to monopoly pricing. In these situations, some form of

government intervention is required in order to avoid the exploitation of monopolistic advantage by private agents. [51] points out the governmental control and ownership of these types of tourist attractions, also considering economic regulation as a useful alternative to monopoly power [52]. In turn, [54] suggest the use of taxation to alter the incorrect allocation of resources.

2.4 Asymmetric Information

Tourism has been widely described as a market prone to information asymmetries [55–57]. Due to the fragmented nature of tourism markets and the separation between the origin of tourism firms and tourist destinations, it can be expected that information asymmetries will be felt with great intensity [58]. Under information asymmetry, market adjustment mechanisms fail to take effect, justifying the intervention of governments in the regulation of information provided to tourists [59].

Indeed, governments may carry out quality grade standards for tourist attractions and other normative criteria, such as official hotel classification systems as one of the best examples of this type of policy [60]. In addition, [61] suggest the definition of quality standards resulting from certification processes by non-governmental and specialized agencies as another set of tools to reduce the negative effects of asymmetric information in tourism markets. [52] suggest that governments can provide tourism information directly through their own offices and/or encourage private agents to assist in the dissemination of such information [62]. Finally, several authors emphasize other forms of public intervention, such as the use of information and communication technologies (ICTs) as powerful tools in the dissemination of tourist information [12, 63].

In sum, this survey of the literature suggests some consensus regarding the presence of market failures in tourism markets. Most scholars suggest that government intervention is crucial to improve resource allocation in tourism markets, and several policy tools appear as possible solutions to accomplish this goal. However, the debate surrounding the match between perceived market failures and the appropriate policy tools to correct them is far less consensual. In addition, there is also some sense that the gap between policy recommendations and policy adoption is wider than previously thought. In order to start overcoming these perceived gaps, the following section presents five sets of hypotheses, derived from the literature, linking local governments with different tourism profiles to their choices of policy instruments designed to correct tourism market failures.

3 Hypotheses

The literature shows that direct government provision is relevant to solve most market failures, perhaps with the exception of tourism externalities. However, local government involvement in tourism policy is likely to vary according to the importance of tourism as an economic activity in each municipality. Typically, the intensity of tourism development varies across regions and municipalities, not only due to the different levels of concentration and clustering of tourism activities, but also as a result of government interventions providing incentives and/or imposing restrictions on spatial patterns of tourism development [15]. The hypotheses developed in this section

take into consideration this spatial variation of tourism activities by making predictions about which policy tools are more likely to be adopted in municipalities appealing to different tourism markets (international, national and regional/local).

In the case of tourism public goods, several authors argue that the most appropriate way to promote a tourist destination is through direct intervention and public funding [24]. The level of tourism importance of a municipality is also likely to Bonham affect the use of direct provision and regulation in tourism promotion. It can also be expected that municipalities with an international touristic profile will rely more often in market-based mechanisms. As a result, we predict that:

H1a: Municipalities appealing to international markets are more likely to develop their own tourism brand.

H1b: Municipalities appealing to international markets are more likely to participate in international tourism exhibitions or fairs.

H1c: Municipalities appealing to international markets are more likely to adopt a marketing plan specifically dedicated to tourism than municipalities appealing to national or regional markets.

H1d: Municipalities appealing to international markets are more likely to attract funding from private local actors expecting to profit from tourism initiatives than municipalities appealing to national or regional markets.

Public sector initiatives are also advocated in the case of the provision and funding of tourism infrastructures [17]. Just as with tourism promotion, the level of tourism importance of each municipality should affect its ability to attract investment and funding for infrastructures. Municipalities involved in international markets for tourism are also expected to display higher professionalism in addressing policies to promote tourism infrastructures. Because of this level of professionalism, we can expect that:

H2a: Municipalities appealing to international markets are more likely to capture European Union funds for tourism infrastructures;

H2b: Municipalities appealing to international markets are more likely to charge entry fees and infrastructures fees in order to curb overcrowding;

H2c: Municipalities appealing to international markets are less likely to resort to financial incentives to local operators than those appealing to regional or national markets.

Finally, tourism coordination and planning are also carried out through direct government intervention [10]. Given the demands and complex nature of tourism activities, it can be argued that only governments are able to plan, coordinate, facilitate and integrate all relevant public and private actors in the tourism industry [41]. As a result, it is expected that Portuguese local governments will be actively involved in the provision of tourism public goods.

Since the tourism industry in Portugal is characterized by many small and medium-sized businesses co-existing with a few large tourism operators, coordination organizations are crucial to secure the development of a coherent municipal strategy for tourism. In more complex tourism markets, it is likely that the coordinating organizations are more autonomous vis-à-vis the local government and involve a more diverse set of agents. Hence, it is expected that:

H3a: Coordination involving multiple stakeholders will be more frequently adopted in international markets than in national or regional ones.

H3b: Coordination using market mechanisms will be more frequently adopted in international markets than in national or regional ones;

H3c: Tourism development plans/strategic plans will be more frequently adopted to regulate tourism land use in international markets than in national or regional ones;

H3d: Municipal Master Plans will be more frequently employed to regulate tourism land use in national and regional markets.

The typology presented by Weimer and Vining [6] recommends the use of subsidies and taxes to address externality problems. The literature on tourism also points out that the most common and simplest policy tool to address externalities is the use of taxes on businesses and/or visitors. [17] state that both regulatory and market mechanisms are not efficient solutions because they fail to target the source of the problem. The authors defend the use of taxes as more efficient, since they allow the effective resolution of the situation and not just its remediation. However, given the previous findings about service provision in the context of Portuguese municipalities (Reference removed for peer review), it can be expected that taxes will rarely be employed as policy solutions to internalize the costs of tourism activities. Instead, it is hypothesized that:

H4a: Taxes will be more frequently used to address externalities in international markets than in national or regional markets for tourism.

H4b: Direct government intervention through regulation will be more frequently used in national and regional markets than in international markets.

Lastly, concerning information asymmetry in tourism, regulation constitutes the primary solution proposed by Weimer and Vining [6]. However, and considering not only the importance of direct provision of tourism information in the case of Portuguese municipalities, but also their limited competences in the regulation of tourism information, it is expected that local governments will be directly involved in the provision of tourism information through their local bureaucracies. Accordingly, it is hypothesized that:

H5a: The direct provision of tourism information will be more likely in municipalities appealing to international markets than in those appealing to national and regional markets.

H5b: The provision of tourism information in digital formats will be more likely in municipalities appealing to international markets than in those appealing to national and regional markets.

H5c: The presence of tourist offices in addition to the standard municipal office will be more likely in municipalities appealing to international markets than in those appealing to national and regional markets.

H5d: The use of official networks involving actors from multiple sectors will be more likely in municipalities appealing to international markets than in those appealing to national and regional markets.

4 Tourism Policy Tools in Portuguese Local Governments

Historically, local governments in Portugal have assumed an important role in this policy area. During the dictatorship period (1926–1974) they represented the administrative arm of the State, implementing tourism policy according to strict authoritarian rule. During the first years after the reinstatement of the democratic regime, municipalities became the sole actors involved in tourism planning, as a result of a bottom-up, laissez-faire type approach to tourism by the national governments.

[64] and the [65] defined a set of strategic areas where Portuguese municipalities could play an active role at the time, namely: i) forecasting the evolution of demand and the levels of use of tourism infrastructures; ii) identifying tourist resources, attractions and upcoming events; iii) managing the transportation network, accessibilities, and signaling; iv) creating or participating in local institutions aimed at tourism promotion; v) building infrastructures for tourism and local communities, ensuring, for example, water supply, sewage, and refuse collection; vi) developing tourism planning strategies; vii) involving public tourism agents at the national and regional levels; viii) assessing the economic, sociocultural, and environmental effects of tourism; ix) elaborating local strategies for tourist attractions; and x) providing tourism information.

The approval of the National Strategic Plan for Tourism in 2007 marks the beginning of a new era. This plan established the legal framework to promote growth and sustainable development (economic, social, and environmental) of national tourism, taking into consideration the articulation between public and private tourist agents, including also local governments. The Law of Tourism Public Policies (Law-Decree 191/2009, August 17) identifies municipalities as public tourism agents along with other national and regional authorities. Indeed, municipalities are local entities with responsibilities in planning, development and implementation of tourism policies, whose role is to promote tourism development through coordination and integration of public and private initiatives in order to achieve the goals of the Tourism 2020 Action Plan. The current political-administrative organization of tourism in Portugal reflects an orientation towards multi-level governance, combining a vertical structure headed by the national government providing strategic orientations with a horizontal structure involving regional, local and private actors.

Currently, Portuguese municipalities invest human and financial resources in the promotion of tourism at both national and international levels. They work in close connection with Regional Tourist Offices for internal tourism promotion, and with the Regional Tourism Promotional Bureau, for international tourism promotion. Local governments have also been involved in the development of several forms of collection, systematization, and dissemination of touristic information. Municipalities actively promote the development of mobile applications, tourist websites, social networks and tourist flyers and newsletters, among others.

Tourism is now a strategic priority for both the national government and the municipalities, as confirmed by the presentation of the Strategy for Tourism 2027. This strategic reference for tourism in Portugal was developed through a broad and creative participatory process, in which the national government assumes a coordination responsibility and mobilizes tourist agents and society. It is a long-term strategy that

aims: i) to ensure stability and commitment on strategic options for national tourism; ii) to promote the integration of sectoral policies; iii) to generate a continuous articulation between the various stakeholders involved in tourism markets; and iv) to act with a strategic sense in the present and in the short/medium term.

Empirical work concerning municipal service provision in Portugal suggests that local governments actively engage in the direct provision of public goods and services through their own internal bureaucracies and that market-based policy tools are far less preferred (Reference removed for peer review). In addition, Law 69/2015, July 16 transferred competences from the national government to local governments, reinforcing the role of Portuguese municipalities in tourism policy. Competences related to rural and urban infrastructures, energy, public transportation, heritage, culture, among others, are just a few examples of competences connected, directly or indirectly, to tourism. Given this background, the expectation was that municipalities are heavily involved in the provision of tourism policies, primarily using their own staff and, alternatively, using organizations at arm's length of the municipalities (municipal corporations, public-public partnerships, and assorted forms of intermunicipal cooperation) (References removed for peer review).

5 Data and Methods

Given these arguments, a multi-methods research plan was adopted, using questionnaires and interviews as data collection techniques to help achieve the main goal of this paper. Specifically, based on information gathered from exploratory interviews and the literature review, a survey questionnaire to tourism managers in all 308 Portuguese municipalities was elaborated and applied between December 2013 and April 2014 (at the moment this it's the more current study). The questionnaire was pretested in the limited set of municipalities where the interviews had been conducted. The final response rate was approximately 70% (214 municipalities).

For each tourism market failure, policy tools were structured in different groups inspired by the Weimer and Vining typology. For each of these groups, all the policies mentioned by our respondents as present in their own municipality were added and divided by the total number of policy tools in each group to obtain the average value use for each group, thus allowing comparisons between groups of policy tools.

Given the expectation regarding the spatial distribution of tourism activities stated in the hypotheses section, the analysis of the adoption of tourism policies was structured by dividing the municipalities in our sample into three groups according to tourism importance: regional, national and international markets. The first group – regional markets – includes municipalities in the lowest quartile of bed capacity (municipalities with capacity varying from zero up to 41 beds). The second group corresponds to national markets and includes municipalities in the second and third quartiles of bed capacity (between 42 and 513 beds). Finally, the upper quartile group includes municipalities appealing to international markets (capacity above 513 beds). Nonparametric Kruskal-Wallis tests are employed to compare these independent samples. The following section presents the results of the empirical analysis.

6 Empirical Analysis

In this section, the results from our survey are analyzed and their implications for the core hypotheses of this work discussed. The overall findings suggest a strong and direct involvement of Portuguese local governments in the adoption of policies to solve market failures related to public goods, information asymmetry, and negative externalities. In the first two cases, this presence is translated into direct intervention using the municipalities' own workforces; in the case of negative externalities, local governments prefer municipal regulation (ordinances) as the main form of policy intervention.

The results support the theoretical argument that tourism promotion activities are primarily secured by governments through direct provision and public financing to avoid free-rider problems (see Table 1 – Appendix 1).

On average, 166 municipalities out of 214 indicated policies from this group as the preferred choice. Almost all municipalities surveyed report the preparation of promotional materials (207), and most mention the use of the municipal budget, European Union funds, and the participation in national and international exhibitions to promote tourism. In support of H1a, the findings show statistically significant differences in preferences for the development of a tourism brand. Municipalities where tourism has international relevance are more likely to favor the establishment of a tourism brand to project their national and international importance as a touristic destination. Local planning policies for tourism promotion – a plan for tourism promotion and tourism marketing plan – were adopted by 80 and 36 municipalities, respectively. The results related to planning policies are also statistically significant at conventional levels, therefore supporting H1c. Tourism marketing plans are most often adopted by municipalities with an international level of tourism importance. In addition, tourism planning tools, as a unique set of policies, tend to be adopted by municipalities where tourism is a highly relevant economic activity. In contrast, no support was found for both H1b and H1d. Municipalities with an international tourism profile are not more likely to participate in international tourism fairs or fund tourism promotion with the help of private sector agents.

Direct provision policies are also extremely important in the case of tourism infrastructures, closely followed by the use of subsidies and taxes (see Table 2 – Appendix 2). The use of European Union funds is reported by 191 municipalities (out of 214), whereas 148 indicate the municipal budget as a source of financing for tourism infrastructures. In general, the results support the literature stating that the provision and financing of tourism infrastructures should be secured directly by governments [17]. In addition, the results also confirm prior findings that taxes and subsidies are employed by a considerable number of municipalities and can be used as complementary policy tools, or secondary solutions [6].

Besides fiscal and financial incentives, local governments in Portugal also charge entry fees and infrastructure fees (also known as impact fees) to finance local infrastructure to accommodate tourism pressures. More specifically, the results related to financial incentives and entry fees indicate statistically significant differences between municipalities at confidence levels of 90% and 99%, respectively. Both results provide

support to H2b and H2c. Consistent with the idea of local government direct promotion of tourism infrastructures, the use of financial incentives, such as the provision of grants or loans for the construction of tourist facilities, is most often used by municipalities where tourism is less relevant (regional or national levels of tourism importance). In contrast, the use of entry fees is more common in municipalities with national and international levels of tourism. This finding supports the argument that entry fees are employed to moderate access of tourists to tourist attractions subject to congestion and overcrowding. In contrast, the findings fail to support H2a. Municipalities with an international tourism profile are not more likely to resort to European Union funds to finance tourism infrastructures than municipalities without that profile.

Table 3 (Appendix 3) shows that regulation is the preferred group of policy tools to address coordination/planning failures. We investigated whether municipalities regulate land use activities related to tourism through a special-purpose tourism strategic plan or if they simply regulate these activities using the general Municipal Master Plan. Tourism strategic plans were adopted in 68 municipalities, whereas 103 respondents mentioned that tourism planning is addressed in the municipality's Master Plan. Contrary to other public goods, direct provision policies are scarcely used by Portuguese municipalities to tackle coordination. These findings partially contradict the main arguments present in the literature. Since tourism coordination and planning have public good characteristics, the main policy tool referenced to minimize the effects of this market failure consists of direct government intervention [10]. The results fail to show statistically significant differences between the three groups of municipalities. Municipalities with an international level of tourism importance are not more likely to favour tourism strategic plans and municipalities where tourism is less relevant also do not show a preference to regulate land use for tourism activities through the Municipal Master Plan. H3c and H3d do not receive empirical support.

In contrast, the findings are highly supportive of both H3a and H3b. Consistently with H3a, the existence of a coordination advisory body involving the participation of public and private actors as well as a structure oriented to coordination involving the participation of a similar set of actors are more likely in municipalities where tourism takes on international importance. Still related to coordination issues, Portuguese municipalities adopt market/voluntary mechanisms as policy tools to solve coordination/planning failures. Once again, in line with H3b, municipalities with an international level of tourism are far more likely to opt for coordination structures totally independent of the public sector. Just as in the case of tourism infrastructures, the results for tourism coordination/planning do not show any dominant group of policy solutions adopted by Portuguese local governments. In sum, these results reveal that local governments in Portugal play a very active role in the provision of tourism promotion and infrastructures, displaying a somewhat lesser role in tourism coordination/planning.

The findings presented in Table 4 (Appendix 4) show that local governments in Portugal prefer regulatory policies over the use of subsidies and taxes to curb negative externalities. However, neither set of policy tools is adopted more frequently by municipalities with an international tourism profile. Thus, the findings fail to support both H4a and H4b. Nevertheless, these results confirm the conclusions of a study presented by [66] pointing out that, contrary to what happens in many European countries, Portuguese local governments have failed to adopt tourism taxes in a

systematic manner. Despite the controversies regarding this kind of taxation, the literature suggests that if tourist taxes are properly designed and effectively implemented, they can contribute to improve social welfare. Portuguese municipalities are not taking advantage of the potential benefits associated with tourism taxes and infrastructure fees.

According to the information obtained in our interviews (but not evident in the responses to our survey), direct provision represents yet another group of policy tools employed to address negative externalities. Tourism managers mentioned the use of direct provision policy instruments to internalize negative external effects, such reinforcing the collection of municipal solid waste, cleaning beaches and recreational areas, creating logistical support, among other policies.

Lastly, the results suggest that municipalities opt for direct provision in the preparation and dissemination of tourism information (Table 5 – Appendix 5). Several policies in this category receive almost unanimous acclaim, including tourist maps, tourist brochures, tourist circuits, and the provision of information in foreign languages. These results are consistent with the theoretical arguments present in the literature [62]. Statistically significant differences were found for the use of policy tools across municipalities with different levels of tourism importance. Municipalities with an international profile are more likely to adopt direct provision of information, thus confirming the argument conveyed by H5a. This group of municipalities is also more likely to support the provision of information using digital formats, in accordance with the prediction stated in H5b. These municipalities are also more likely to have tourist offices which are not sponsored by the municipality, which lends support to H5c. The only hypothesis which does not receive support is H5d: the use of official networks with multiple stakeholders for information provision does not seem to vary significantly between municipalities with different tourism profiles.

7 Conclusions and Future Research

This research investigated the adoption of tourism policy tools by Portuguese local governments and whether these choices are closely aligned with the predictions made by the public policy literature regarding the correction of market failures. In particular, it focused on two research questions: 1) Do different levels of tourism activity lead to the adoption of different types of policies adopted in Portuguese municipalities? 2) If so, what types of policies are associated with municipalities with different tourism profiles?

The empirical analysis shows that some policy choices by Portuguese municipalities are quite conventional: the use of direct intervention to supply public goods and address information asymmetries and the adoption of taxes and fees to finance tourism infrastructures. However, Portuguese local governments also display innovative policy features, which distinguish them from conventional tourism policy practices. For example, some municipalities adopt planning policies for tourism promotion, use their own bureaucracies to address negative externalities, and opt for market mechanisms to solve natural monopoly situations (see Table 6 – Appendix 6).

Based on the theory of market failures and the tools of government approach, this work builds on existing work [17, 26] to extend the Weimer and Vining's public policy typology to the field of tourism and performs an empirical analysis to test hypotheses

about the patterns of policy tool adoption in Portuguese municipalities. The analysis divided the municipalities in the sample in terms of their levels of touristic appeal – regional, national, and international markets – and tests whether the types of policies adopted vary across these groups.

The key argument stated throughout the paper is that the policy tools adopted by local governments in Portugal are associated with the tourism profile of each jurisdiction. Consistently with a more professionalized outlook on tourism, municipalities where tourism is a highly relevant economic activity are more likely to display more sophisticated policy instruments to address market failures such as public goods, negative externalities and information asymmetry problems. For example, they are more inclined to develop a tourism brand, to involve multiple stakeholders in the planning and coordination of tourism activities, and to engage in the use of information and communication technology tools to disseminate information about the municipality. They are also more likely to charge entry fees to pay for tourism infrastructures.

Our study suffers from a number of limitations. First, the use of a survey questionnaire to investigate the adoption of tourism policy tools to correct market failures requires an adjustment of the technical language in order to get the intended results. Unfortunately, this language fine-tuning was not always effective. In the case of one specific type of market failure – natural monopolies – the information collected from our survey suggests that tourism managers answering our survey were thinking about the municipality's main tourist attraction(s) rather than situations where natural monopolies are present. This rendered unusable the survey results for this particular situation. Another limitation of this work is related to the absence of longitudinal data, which has prevented testing causality between the different levels of importance of tourism activity and the adoption of specific policy tools.

This investigation suggests that the intervention in tourism markets by Portuguese municipalities relies primarily on the use of direct provision. For most municipalities, direct provision using the municipality's own workforce is still the main, sometimes the only, set of policy tools employed when addressing tourism market failures. However, if one considers that local initiatives to encourage tourism development are related to the mitigation of tourism market failures, the question that arises is whether such policy tools are the best way to promote local tourism development. Future work will explore this relationship by attempting to identify which tourism policy tools most contribute to enhance local economic development and to promote sustainable tourism development. In addition, future research should also focus on monitoring and evaluating tourism policies to assess their contribution to these development goals.

Appendix 1

Table 1. Tourism Policy Tools, Tourism Promotion.

Policy tools for tourism promotion (yes)	Level of tourism importance			<i>Pearson's chi-squared</i>	Policy Tools Groups [n = 214]	<i>Kruskal-Wallis or Pearson's chi-squared</i>
	Regional [n = 57]	National [n = 101]	International [n = 56]			
	Number of yes					
Municipal budget for tourism promotion (165)	44	80	41	Not Significant	Direct provision [n = 166]*	Not Significant
European Union funds (184)	50	89	45	Not Significant		
Preparation of promotional materials (207)	55	97	55	Not Significant		
Tourism brand (100)	20	44	36	<i>Pearson chi2 (2) = 17.474</i> p-value = 0.000		
Participation in national tourism promotion exhibitions (168)	42	81	45	Not Significant		
Participation in international tourism promotion exhibitions (161)	40	78	43	Not Significant		
Logistical support to private local actors in the different promotional activities (178)	44	84	50	Not Significant		
Tourism marketing plan (36)	9	8	19	<i>Pearson chi2 (2) = 10.444</i> p-value = 0.005	Regulation [n = 58]*	<i>Chi-squared (2) = 7.812</i> p-value = 0.020
Plan for tourism promotion (80)	21	32	27	Not Significant		
Tourism promotion funding by private local actors (46)	11	20	15	Not Significant	Market mechanisms [n = 46]*	Not Significant

* Numbers in parentheses corresponds to the sum of all “yes” divided by the number of items in each policy tool group.

Appendix 2

Table 2. Tourism Policy Tools, Tourism Infrastructures.

Policy tools for the development of tourism infrastructures (yes)	Level of tourism importance			<i>Pearson's chi-squared</i>	Policy Tools Groups [n = 214]	<i>Kruskal-Wallis or Pearson's chi-squared</i>
	Regional [n = 57]	National [n = 101]	International [n = 56]			
	Number of yes					
Municipal budget for tourism infrastructures (148)	37	72	39	Not Significant	Direct provision [n = 121]*	Not significant
European Union funds (191)	50	91	50	Not Significant		
Banking protocols with financial institutions (86)	21	37	28	Not Significant		
Structure to support promoter of tourism investment (105)	24	48	33	Not Significant		
Preparation and provision of guidelines to support promoter of tourism investment (74)	18	34	22	Not Significant		
Financial incentives (76)	26	36	14	<i>Pearson chi2 (2) = 4.677</i> <i>p-value = 0.096</i>	Subsidies and Taxes [n = 111]*	Not significant
Fiscal incentives (92)	26	43	23	Not Significant		
Charging of entry fees (88)	18	35	35	<i>Pearson chi2 (2) = 14.460</i> <i>p-value = 0.001</i>		
Charging of infrastructures fees (188)	50	89	49	Not Significant		

* Numbers in parentheses corresponds to the sum of all "yes" divided by the number of items in each policy tool group.

Appendix 3

Table 3. Tourism Policy Tools, Tourism Coordination/Planning.

Policy tools for tourism coordination/planning (yes)	Level of tourism importance			Pearson's chi-squared	Policy Tools Groups [n = 214]	Kruskal-Wallis or Pearson's chi-squared
	Regional [n = 57]	National [n = 101]	International [n = 56]			
	Number of yes					
Coordination advisory body involving the participation of public and private actors (24)	2	10	12	Pearson chi2 (2) = 9.442 p-value = 0.009	Direct provision [n = 36]*	Chi-squared (2) = 13.037 p-value = 0.002
Oriented coordination structure involving the participation of public and private actors (67)	12	31	24	Pearson chi2 (2) = 6.278 p-value = 0.043		
Coordination structures created by government that operate closer to the market logic (16)	2	8	6	Not Significant		
Coordination structures totally independent of public sector intervention (53)	8	19	26	Pearson chi2 (2) = 19.548 p-value = 0.000	Market mechanisms [n = 53]*	Pearson chi2 (2) = 19.548 p-value = 0.000
Tourism Development Plan/Strategic Plan (68)	16	33	19	Not Significant	Regulation [n = 86]*	Not Significant
Municipal Master Plan (103)	30	51	22	Not Significant		

* Numbers in parentheses corresponds to the sum of all “yes” divided by the number of items in each policy tool group.

Appendix 4

Table 4. Tourism Policy Tools, Negative Tourism Externalities.

Policy tools to mitigate negative externalities from tourism (yes)	Level of tourism importance			Pearson's chi-squared	Policy Tools Groups [n = 214]	Kruskal-Wallis or Pearson's chi-squared
	Regional [n = 57]	National [n = 101]	International [n = 56]			
	Number of yes					
Charging of entry fees (17)	4	11	2	Not Significant	Subsidies and Taxes [n = 10]*	Not significant
Charging of infrastructures fees (15)	7	6	2	Not Significant		
Charging tourist fees (overnight rate) (1)	0	0	1	Not Significant		
Charging fees to local tourism industry (7)	2	2	3	Not Significant		
Regulations and/or municipal ordinances (60)	15	25	20	Not Significant	Regulation [n = 60]*	Not significant

* Numbers in parentheses corresponds to the sum of all “yes” divided by the number of items in each policy tool group.

Appendix 5

Table 5. Tourism Policy Tools, Tourism Information Asymmetry.

Policy tools for the disclosure of tourism information (yes)	Level of tourism importance			<i>Pearson's chi-squared</i>	Policy Tools Groups [n = 214]	<i>Kruskal-Wallis or Pearson's chi-squared</i>
	Regional [n = 57]	National [n = 101]	International [n = 56]			
	Number of yes					
Additional tourist offices distributed by major points of tourist interest (128)	27	65	36	<i>Pearson chi2</i> (2) = 5.006 <i>p-value</i> = 0.082	Direct provision [n = 164]*	<i>Chi-squared</i> (2) = 18.925 <i>p-value</i> = 0.000
Municipal tourist office (169)	48	82	39	Not Significant		
Tourist guides (151)	38	73	40	Not Significant		
Tourist maps (199)	47	97	55	<i>Pearson chi2</i> (2) = 13.490 <i>p-value</i> = 0.001		
Tourist brochures (208)	56	97	55	Not Significant		
Tourist circuits (190)	54	83	53	<i>Pearson chi2</i> (2) = 8.385 <i>p-value</i> = 0.015		
Tourist information in foreign languages (194)	49	92	53	Not Significant		
Tourist signposting (directional and information signs) (195)	54	90	51	Not Significant		
Information and communication technologies in tourism (99)	20	41	38	<i>Pearson chi2</i> (2) = 14.673 <i>p-value</i> = 0.001		
Virtual social networks (185)	46	89	50	Not Significant		
Institutional website (211)	56	100	55	Not Significant		
Tourism institutional website (37)	4	13	20	<i>Pearson chi2</i> (2) = 18.878 <i>p-value</i> = 0.000		
Non-municipal tourist office (58)	4	25	29	<i>Pearson chi2</i> (2) = 29.190 <i>p-value</i> = 0.000		
Official network of tourist information involving private local tourist actors (71)	14	35	22	Not Significant		
Official network of tourist information involving public local tourist actors (73)	14	37	22	Not Significant		
Official network of tourist information involving non-tourist actors (38)	7	16	15	Not Significant		

* Numbers in parentheses corresponds to the sum of all "yes" divided by the number of items in each policy tool group.

Appendix 6

Table 6. Tourism Market Failures and Public Policy Tools.

Market failures (1)	Tourism public policy tools (2)	Portuguese local governments (3)	Typology of tourism policy tools (4)	
Tourism public goods				
Tourism promotion	Direct provision of tourism promotion	Direct provision of tourism promotion	Direct provision of tourism promotion	
	Taxes charged to tourism activities	Taxes charged to tourism activities	Taxes charged to tourism activities	
	Financial participation by private agents	—————	Financial participation by private agents	
	—————	Tourism marketing plan and Plan for tourism promotion	Tourism marketing plan and Plan for tourism promotion	
Tourism infrastructures	Direct provision of tourism infrastructures	Direct provision of tourism infrastructures	Direct provision of tourism infrastructures	
	Financial incentives Fiscal incentives Tourist taxes Users charges or entry fees	Financial incentives Fiscal incentives Tourist taxes Users charges or entry fees	Financial incentives Fiscal incentives Tourist taxes Users charges or entry fees	
	Direct provision of coordination/planning Coordination structures created by government that operate closer to market logic	Direct provision of coordination/planning Coordination structures created by government that operate closer to market logic	Direct provision of coordination/planning Coordination structures created by government that operate closer to market logic	
	Coordination structures totally independent of public entities	Coordination structures totally independent of public entities	Coordination structures totally independent of public entities	
Tourism coordination/planning	Tourism activity plans	Tourism activity plans	Tourism activity plans	
	Tourism externalities			
	Positive/negative	Regulation of tourism activities	Regulation of tourism activities	Regulation of tourism activities
Tourist taxes		Tourist taxes	Tourist taxes	
Definition of property rights		—————	Definition of property rights	
—————		Direct provision	Direct provision	
Natural monopoly in tourism activity context	Direct provision of tourist attractions with natural monopoly characteristics	Direct provision of tourist attractions with natural monopoly characteristics	Direct provision of tourist attractions with natural monopoly characteristics	
	Price regulation	Price regulation	Price regulation	
	Taxation of profits of private agents	Taxation of profits of private agents	Taxation of profits of private agents	
	—————	Absence of regulation or direct provision	Absence of regulation or direct provision	

(continued)

Table 6. (continued)

Market failures (1)	Tourism public policy tools (2)	Portuguese local governments (3)	Typology of tourism policy tools (4)
Tourism information asymmetry	Direct provision of tourism information Official network of tourist information (hybrid forms)	Direct provision of tourism information Non municipal tourist office (hybrid forms) Official network of tourist information involving private local tourist agents (hybrid forms)	Direct provision of tourism information Non municipal tourist office (hybrid forms) Official network of tourist information (hybrid forms) Official network of tourist information involving private local tourist agents (hybrid forms)
	Regulation of tourism information (by governments)	—————	Regulation of tourism information (by governments)
	Regulation of tourism information (by private agents)	—————	Regulation of tourism information (by private agents)

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