Evaluation of the tourism impact on the rehabilitation and use of the historic centre’s buildings: The case of Baixa Pombalina

Extended abstract of dissertation for the degree of Master in Civil Engineering

Manuel Abrantes Pereira de Mello
Instituto Superior Técnico, Lisbon, Portugal

October 2016

Abstract
Due to the increasing technological development and the democratization of travels that occurred in the recent past, tourism has become one of the most important economic sectors worldwide. However, this sector not only promotes economic impacts but also physical impacts resulting from the relationship between the tourist and the destination. On the other hand, the buildings’ rehabilitation has become one of the most important pillars of the construction industry, particularly on the built environments of the developed countries. Thus, the relevance of these two themes - tourism and rehabilitation of buildings – led to the decision of studying how they relate at the level of an historic district. Thus, the main goal of this thesis is the evaluation of the tourism impact on the rehabilitation and use of buildings in historic centres. In order to achieve the main goal, it was chosen a case study - Baixa Pombalina – and it was analyzed a set of variables that were considered relevant: the number of rehabilitation interventions directly or indirectly related with the tourism growth, such as the supply of tourist accommodation, cultural facilities, street retail and housing stock, the assessment of the degree of intervention, the change of use on the intervened buildings and the population that occupies the buildings of Baixa. Thus, the present work led to the conclusion that the tourism sector had an important role in boosting the building rehabilitation and occupation in Baixa Pombalina during the study period.

Key-words: Building rehabilitation, conservation, historic districts, urban tourism, heritage tourism.

1. Introduction
The purpose of this thesis is to assess the impact that the tourism growth has on the historic centre’s buildings rehabilitation and change of use. In order to achieve this goal, five specific goals were established:

**O1:** Assess the impact of the growth of the supply of touristic accommodation on the buildings’ rehabilitation
**O2:** Assess the impact of the growth of cultural facilities on the buildings’ rehabilitation
**O3:** Assess the impact of tourism on buildings’ rehabilitation for retail use
**O4:** Assess the impact of tourism on the rehabilitation of the housing stock
**O5:** Assess the impact of tourism on the population of the historic districts

Beyond the establishment of the previous specific goals, a case of study was chosen: Baixa Pombalina. Lisbon has been living a considerable growth of the tourism demand that is reflected in all indicators of the activity. As the heart of the historic centre of Lisbon, Baixa Pombalina is now living a period of renovation after decades marked by the desertification and degradation of its buildings. Thus, the present study aims to analyse the “turistification” issue of Baixa through a physical and functional
perspective, using a methodology that can be applied and adapted to any other historical district, based on a quantitative analysis of data. Thus, there are not detailed in this paper the social, environmental and infrastructure aspects.

2. State of Art

The dissertation involved a research about its two central themes: the rehabilitation of buildings and tourism development. Thus, it is important to bear in mind that the concerns about the rehabilitation of the built environment begun in the ‘30s, influenced by Giovannoni (1931), and continued with greater intensity through the ‘70s. It is also important to highlight the work of Birch (2005), Shipley and Snider (2013) and Sirisrisak (2009) about the effects that the conservation of historic centres has in promoting their revitalization and development.

Focusing on the central themes of the dissertation, the rehabilitation of buildings can happen in different ways and for different reasons. According to Langston et al. (2008), when the process of rehabilitation of a given building is due to the fact that the functions that it hosts are no longer relevant or desired it is named as adaptive reuse. According to Johnson (1996) this is an increasingly common procedure since in modern times the use of the buildings has become increasingly temporary. Thus, as important assets of cities, buildings are intervened based on their use and economic viability it offers, as authors like Nasser (2003) and Sampaio (2007) argue.

Tourism and historic centres have seen their relationship intensified due to the growth of two tourist segments in recent years: urban tourism and heritage tourism. These two segments drew the interest of many researchers, such as Law (1996), Edward et al (2008), Madden and Shipley (2012), Yale (1991), Timothy and Boyd (2006) and Poria et al (2003). But what consequences can tourism bring to cities? According to Madden and Shipley (2012), as the cities earns tourism potential, its history gains market value as well. Thus, cities change from production centres to consumption centres (Page, 1995). Law (1993) and Swarbrooke (2000) argue that tourism, as one of the most important industries in the world, can promote the development of cities by improving their infrastructures. Galdini (2007) and Sudi (2013) emphasize the importance of the contribution that tourism played in promoting rehabilitation of the built environment in their case studies of Genoa, Lamu and Mombasa.

Relatively to studies on the historic centres and their buildings, it is important to highlight the studies of Sirisrisak (2009), Teo and Huang (1995), Parlett et al (1995) about the impact that tourism had on the rehabilitation of each of the case studies. Orbasli (2000) and Zukin (1995) points out that many historical buildings are rehabilitated and converted to other uses, such as housing, trade and cultural attractions and that these changes are intensified by the tourism sector. Thus, it arises an opportunity to reuse historic buildings that were vacant and to enhance its economic value. However, there is also the risk of generating a standardisation of trade and services. Authors, such as Nasser (2003), Teo and Huang (1995), Clement et al (2015), Valencia (2010) and Larkham (1995), named this process as "McDonaldization" or "Disneyfication". On the other hand, there is also the risk of promoting an
inflationary pressure in historic centres, which are regularly associated with an aging population, economically fragile and a more traditional street retail as Pareja and Simó (2014) and Gotham (2005) studied.

3. Methods
The research method assumed in this thesis was based in Quivy and Campenhoudt (2008) and replies to the following questions: What to observe? Where to observe? and How to observe?

3.1. What to observe?
To accomplish the present dissertation, it was necessary to identify the variables needed to draw conclusions about the changes on Baixa’s dynamic, due to the growth of the tourism sector in the recent past: Number of rehabilitation interventions; rehabilitation degree; changes of use; and total population. In order to assess the degree of the building interventions it was adopted the Appleton et al. (2002) classification. This classification defines 4 degrees of intervention: slight, mean, profound and exceptional. To characterize the numerous stores on the street retail in Baixa it was adopted the following classification by Cushman and Wakefield: independent (domestic shopkeepers with a stand-alone unit), multiple (domestic chain stores) and international (international chain stores).

3.2 Where to observe?
As referred in the previous chapter of this paper, the case study chosen is Baixa Pombalina which is still nowadays the reflection of Lisbon’s reconstruction after the catastrophic earthquake of 1755. Classified as Public Interest Zone, Baixa Pombalina represents the heart of the historic centre of Lisbon. The study area corresponds to the Detail Plan of the Baixa Pombalina Protection area (Figure 3.1). This detail plan represents an important contribute to the revitalization of the area and constitutes one of the basis for the candidacy of the historic centre as UNESCO World Heritage. Beyond the importance that this document assumes in the context of the historic centre, the goals of the detail plan meets the developed study in this dissertation, namely, the promotion and revitalization of Baixa, its conservation and the re-establishment of the safety of its buildings.

3.3 How to observe?
The data collection to achieve de aims of the present dissertation was carried out mainly in three ways that complement each other: documental research, quantitative analysis of data and field visits. The documental research was made through documents of consulting groups such as Jones Lang LaSalle and Cushman and Wakefield, associations such as Tourism of Portugal and strategic documents of territorial planning. The quantitative analysis was made through the collection of the data of institutions like Instituto Nacional de Estatística (INE), Câmara Municipal de Lisboa (CML), Registo Nacional do Turismo.
and Sistema de Informação Residencial (SIR). Lastly, the field visits gained an extreme importance during the development of this research in order to comprehend and complement the collected data.

4. Results and Discussion
4.1. Touristic accommodation

The touristic demand in Portugal, particularly in Lisbon, has been living a pattern of continuous growth in the recent past. Consequently, the growth of the demand is reflected on the growth of the supply, namely, on the touristic accommodation. In Baixa, the touristic accommodation’s supply can be classified in two groups: touristic enterprises, including hotels and lodges and local accommodation, including hostels, guesthouses and apartments. According to the field visits and the data collected from RNT, it was possible to identify 50 touristic establishments in Baixa, disregarding the apartments. From these 50 establishments, 40 emerged during the period of study, which represent s around 73% of the supply, 47.324 m² of area and 35.9 million euros of investment. However, the results must be analysed with caution since they are approximate values. The costs per rehabilitated unit area given by experts in the field, however, the areas were obtained through confrontation of the measurements in AutoCAD software and the observations made during the field visits.

Each one of these establishments confirmed that the construction of its facilities was associated with rehabilitation projects. The classification of the rehabilitation’s degree wasn’t the most accurate. However, it allowed comprehending the phenomena’s dimension. Thus, from the 40 establishments emerged during the period of study, 28 suffered deep interventions of rehabilitation and 12 suffered exceptional interventions of rehabilitations. These results are related with the complexity usually associated with these operations, since the vast majority resulted in a change of use of buildings, mainly, from other uses like housing and services and also buildings that were partially or totally vacant. Thus, these data also demonstrate the existence of a process named as adaptive reuse (Langston, 2008), that has been imposed in the buildings of the area, due to the growth of the tourism sector. For the values stated above were not considered all accommodation establishments in the study area that opened before the period of study, but that have recently been submitted to some kind of rehabilitation works, such as increasing or decreasing the number of rooms and that would increase even more those values.

Also outside of values described above is the tourist accommodation type which has the largest number of units in Baixa: the local housing apartments. There were considered 297 apartments for this thesis through the data collected in RNT and CML which represents around 29.700 m² of intervened area and 11.9 million of euros invested. Due to the rehabilitation interventions, the owners can get a quick valorisation of their properties and the investment is rapidly recovered since they offer a better service to their customers and, as such, may require a higher amount for the stay. This should be a study to be developed in the future due to the dimension and importance that the phenomenon of local housing apartments has reached. The growth of this market can be easily explained by the security that offers as
an investment. However, the quality of data for this type of offer is still scarce. In terms of spatial impact of the touristic accommodation in Baixa, it is possible to observe that the distribution of the units might be considered uniform since it does not occurs any concentration of the supply in determined zones of the area.

4.2. Cultural facilities

The cultural facilities are an important component which helps to define a certain touristic destiny. Baixa Pombalina constitutes by itself a point of interest to the tourism sector. However, during the last years there was an increase of the offer of touristic attractions in Baixa’s buildings, in particular, of museums. According to the documental research and the fields visit, during the period of study emerged six museums on Baixa’s buildings, which represents around 21,410 m² of rehabilitated area. In terms of investment it represents around 17.1 millions of euros. Beyond that, five of the six projects of rehabilitation associated with the appearance of these museums were classified as being deep and one as exceptional. The Lisbon Story Centre Museum, the Cerveja Museum and the Lisboa Museum are installed in buildings that were used as the Department of Finances and the Department of Defence before its displacement to the North part of the city with its expansion. These three cases highlight the importance of the development of the touristic sector as an engine for the rehabilitation process in Baixa. Another interesting case is the Dinheiro Museum which is installed in S. Julião church that was abandoned before its current use. Thus, the church was completely rehabilitated and given back to the population. The same happened with the building that nowadays receives the MUDE Museum. Both of these interventions were classified as exceptional due to the complexity of the interventions and to the valorisation experienced by the buildings. Another relevant fact is that all the museums considered in this thesis emerged during the period between 2009 and the current year of 2016, which highlights the great importance that the touristic sector assumes nowadays in Baixa.

4.3. Street Retail

According to the report of Cushman and Wakefield, in 2015, Baixa had eight of the fifteen streets with the biggest offer of street retail. However, Baixa had also the biggest amount of empty commercial area. Withal, this empty area has been showing decrease signs since the year of 2011. The growth of demand of the international and multiples stores had an important contribute to the decrease of the empty area. However, the independent operates still dominate the commercial offer in Baixa.

According to the provided data from CML, complemented with field visits, it was found that during the period between 2005 and 2015 there were approved 111 licenses to rehabilitation projects in commercial surfaces in buildings in Baixa. In quantitative terms, it represents 30,257 m² of area rehabilitated, that it’s to say, approximately 18,2 millions of euros invested. Of the 111 licenses, 76 (69%) are now independent, 12 (11%) international and 16 (14%) multiples operators. However, through a research and field visits it was possible to collect the information that since the year of 2000 until the preset year of 2016, it has emerged at least 44 international and multiple operators. Although
several operators do not belong to the CML license list, it is estimated that the vast majority or even all these stores, have been subject to rehabilitation works before opening.

Thus, the collected data suggest that the street retail in Baixa is not yet nowadays, under the effect of the so called “McDonaldization” or “Disneyfication” pointed by authors like Nasser (2003), Teo and Huang (1995), Clemente et al (2015), Valença (2010) and Larkham (1995) as consequence of the tourism growth. However, doing the analysis at a street level it is possible to notice that Augusta street has lived a transformation of its street retail with the appearance of several mass market and multiple stores.

Another relevant fact it is that from the 44 international and multiple operators identified in Baixa, at least 25 emerged during the period between 2012 and 2016 which can not be dissociated with the legislative change of the rents in 2012. Although it was not possible to analyse the changes of use associated with the new openings in street retail, it is possible to realize that the street trade is increasingly oriented to meet the needs of the tourist, which is currently the largest customer of the stores. As such, there are more and more food and drinks establishments and also small souvenir shops on the streets of the study area. However, it is necessary to bear in mind that the street retail in Baixa was until recently in a high state of degradation. The changing of the law of rents in 2012, the growth of tourism and the reduction of vacant area occurred since 2011 can’t be analyzed as isolated phenomena. That is, the modification of requirements and the amount of demand caused by the growth of tourism combined with the disappearance of the constraints stemmed from the freezing of rents constituted very important factors for the decrease of vacant commercial area. Thus, recent developments must be seen in a positive way because the abandoned shopping area has gradually been occupied and, consequently, a new opportunity for the rehabilitation of the building in the area of study has arisen. The increase in the supply of trade, not only in quantitative but also qualitative terms, attracts a greater number of people to Baixa and not only values the Baixa real estate, but also the neighbourhood itself as an integral and important part of the city for its residents. These valorisation is reflected on the average commercial rent in Baixa (80 € / m² / month), which means that Baixa’s rents are now competing to the average value of Liberdade Avenue’s street retail rent which is mainly dominated by premium brands.

4.4. Housing stock

According to the data from the Census in 2011, Baixa Pombalina is the historic district of Lisbon with the biggest rate of empty accommodation units and degraded buildings. However, there are also some positive signs that point to a growth of the number of rehabilitation projects in Baixa such as the 132 licenses of rehabilitation projects on Baixa’s housing stock between 2005 and 2015. But, it is estimated that more than a half of those licenses correspond to buildings or dwellings that nowadays are being used as touristic accommodation which reinforces the changes of use associated with rehabilitation works that tourism imposes in Baixa.
Authors like Law (1992) defend that the consolidation of a certain touristic destiny might attract more residents to the area. In Baixa, it is possible to observe a growth in both indicators, that is to say, the growth of the touristic demand and supply, the growth of the number of rehabilitation projects on the housing stock and the growth of the resident population (as it will be shown on the next chapter). However, the relation between this statistics is very complex and hard to establish. The importance of promoting residential use for the development of cities highlighted by Birch (2002 and 2005) is not yet noticeable in Baixa Pombalina despite of the results described above. However, it is necessary to keep in mind that this area never managed to impose itself, throughout its history, as an attractive place for living. There are various reasons such as lack of parking, poor infrastructure and equipment that helps to comprehend that reality. As such, it is also proposed as future work to analyze with more depth, the development of the housing stock offer in Baixa, bearing in mind that the information and the data related is scarce and difficult to assess.

4.5. Population

The data from the latest Census in 2011 shows that Baixa’s inhabitant population has suffered a continuous decrease during the period between 1981 and 2001. However, between 2001 and 2011 the development pattern was inverted and the resident population increased (Figure 4.1). To analyse the impact that tourism has on the population of Baixa it was estimated the maximum capacity of accommodation in Baixa (step 1) and the population that actually occupies, currently, the same area (step 2).

Step 1: In order to define the accommodation capacity in Baixa Pombalina it was assumed an average occupation of 2.3 persons per home, according to INE and the number of 605 buildings in the area of study. Beyond that it was also assumed that the standard building has the first 2 floors designed for services and housing (in relation of 50:50), the upper 2 floors (2 dwellings/floor) and attics (1 dwelling) totally designed for housing and the ground floor and the mezzanine retail and services. Thus, the estimated value of the maximum accommodation capacity of Baixa is given by the following expression

\[ C_1 = 605 \times 7 \times 2.3 = 9.740 \text{ pers.} \]

Step 2: To estimate the population that currently occupies the same area it was collected the value of the resident population in the area of study based on Census 2001 and 2011. However, there are no estimated resident population after the year of 2011, which is the period that interests most to this dissertation since it was the one in which the supply of tourist accommodation grew more substantially in Baixa. As such, it was necessary to establish a set of assumptions in order to estimate the growth of the resident population verified during this period. According to the CML data relating to the rehabilitation licenses in the housing stock between 2005 and 2015, there were approximately 105,947
m² of area intervened. However, the local accommodation units are classified as part of the housing stock. Thus, through the exclusion of the local accommodation data of the licenses of the housing stock, it was obtained a value of 15.579 m² that, as a hypothesis for this thesis, was fully allocated to housing during 2011 and 2015.

In addition, it was calculated an average value of the area of the dwellings of 100 m² through a sample of 30 apartments for sale in Baixa. Thus, the 15.579 m² rehabilitated for housing represents approximately 155 new dwellings for habitation. Using again the value of 2.3 inhabitants/dwell, the estimate indicates that between 2011 and 2015 there was an increase of approximately 356 people in Baixa. That is, this population increase plus the resident population in 2011 (1624 pers.) adds up to the total resident population estimated in the year 2015 of 1980 people.

However, tourism has an important contribution to the current occupation of Baixa through a floating population that is necessary to account. Thus, to estimate the floating population that comes from tourism, it was considered the offer of tourist beds in 2015 and an occupation rate of 100%. Despite of being very difficult to achieve this rate, it is the most proper rate to consider in order to compare with the maximum capacity of Baixa. Thus, the floating population that the tourism attracts is given by the following expression:

\[
\text{Pop. floating (2015)} = N_t \text{ beds}_{\text{total accommodation}} + N_r \text{ beds}_{\text{total enterprises}} = 2445 + 1792 = 4237 \text{ pers.}
\]

Thus, the total occupation of Baixa, resident and touristic, which occupied Baixa in 2015 is given by the sum of previous calculations:

\[
\text{Pop. total (2015)} = 1980 + 4237 = 6217 \text{ pers}
\]

This value is substantially lower than the estimated capacity of Baixa (9.740 inhabitants). As such, it is possible to say that Baixa is not overcrowded. However, there is an imbalance between tourist accommodation (4237 beds) and the estimated resident population (1980 inhabitants). The relationship observed in the study area in 2015 was 1 resident per 2 touristic beds, that is, 1: 2. Thus, this values are sufficient to motivate the reflection of decision makers and planners, which should act through a long-term holistic approach as Steinberg (1996) also recommends in his study, that is to say, rehabilitation policies should be implemented taking into account the area of study as a whole and not just as a group of buildings that work in an independently way.

5. Conclusions
The goal of the present dissertation is to assess the impact that tourism has on the building’s rehabilitation and change of use in historic centres, particularly in Baixa Pombalina, through the five specific goals established.

The present study in Baixa Pombalina revealed that, the tourism sector contributed to the growing rehabilitation of Baixa. Considering the most direct effects of tourism on the built environment of Baixa,
that it’s to say, touristic accommodation and cultural facilities, these motivated the intervention of, at least, 98,434 m² which corresponds to approximately 65 million of euros invested. Moreover, this rehabilitation works were classified as profound or exceptional, according to Appleton et al. (2002,) due to the deepness that these works implied, since that in the majority of the cases they were associated to a change of use of the buildings.

Furthermore, a significant number of rehabilitation works at the level of street retail were also imposed indirectly by tourism, since the floating population that this sector attracts for Baixa is currently, its biggest customer. Note also for the 112 rehabilitation licenses released on the housing stock of the area of study during the period between 2005 and 2015. From the intersection between this licenses and the offer of touristic accommodation in 2015, more than half of the buildings or dwellings rehabilitated are currently being exploited as touristic accommodation, which reinforces the change of use that the tourism imposes on the buildings of Baixa.

The analysis on the resident population shows that there was a recent reversal of the decreasing population trend that has been happening for decades. Beyond that, this reversal occurred in the study period, during which there was also the rapidly growing tourism. However, the occurrence of these parallel phenomena has not been possible to relate. Still, the reality is that tourism is responsible for attracting a floating population for Baixa. Furthermore, it can be concluded that the entire resident and floating population from tourism that occupies Baixa, is not enough to consider this area as overcrowded. However, there is an imbalance between the tourist accommodation capacity and the resident population.

Thus, this study contributes to prove that the growth of the tourism sector that occurred worldwide has a considerable impact on the physical environment at the local level and, in particular, in the historic sites which are especially attractive for tourism. That is, it is concluded that tourism not only promotes investment in the rehabilitation of historic buildings but it is also responsible for its reorganization, which is proven by the amount of functional changes that the sector has promoted on the buildings in Baixa.

Regarding the assessment of these changes, that is to say, if they are positive or negative it is necessary to take into account the historical reality of the area of study. In the case of Baixa it is important to bear in mind that the area was in a physical and functional decline since the late 60’s, when occurred the escape of the major services to the north of Lisbon, which led to the escape of the population as well. Furthermore, it is also necessary to consider that to achieve the regeneration of a given place is vital to promote their occupation. If there is no occupation, there is no revitalization. Baixa Pombalina never constituted an attractive place for housing. Thus, tourism arises as an opportunity that should not be set aside to promote their occupation and consequent revitalization. However, proper planning and management of the whole process in an integrated way is necessary, in order to control excessive tourist occupation that could even possibly harm the sector. The results of this study indicate that there
is still a large margin between the maximum capacity and the actual occupation of Baixa. Thus, it is necessary to promote a better balance between residents, tourists and services in order to promote the sustainable development of Baixa. Furthermore, it is important to keep in mind that there is no linear cause effect between tourism and rehabilitation, that is, it is not possible to assume that is the growth of tourism which causes the increase of buildings’ rehabilitation interventions and not the opposite. This process is a complex and dynamic phenomenon. However, it can be concluded that both enhance the growth of each other, and if the demand for tourism had not reached the levels of the past years, the rehabilitation interventions might have not achieved the dimension presented in the study.

6. References

Giovannoni, G. (1931) Vecchie città ed edilizia nuova, Turin, UTET.