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Urban tourism and cultural heritage: The ancient multi-layered medina's in Morocco

Research Memorandum 2019-1

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Urban tourism and cultural heritage: The ancient multi-layered medina's in Morocco

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Abstract: Morocco has a rich and diverse cultural heritage including 35 ancient medina's. Despite these important assets, Morocco is facing some serious stagnation in reaching their tourism ambitions as have been defined in their Vision 2020. To identify their relevance for (urban) tourism, it is crucial to understand and to include the historic and multi-layered development. Based on two empirical approaches, we highlight the tourism potential of each medina in terms of the strategic assets and the availability of tourism infrastructure based on information from AirBNB, Booking, and Tripadvisor. Data from these accommodation websites illustrates existing power-law relations in terms of size and scale, and a natural grouping and patterns in the touristic activity of the medina's. Based on our findings, we propose a research agenda which could further support the Moroccan government in reaching their tourism ambitions with a strong emphasize on urban tourism and the ancient multi-layered medina's.

Keywords: Urban tourism, Medina's, Cultural heritage, Accommodation websites, Morocco

1. INTRODUCTION

1.1 Tourism ambitions in perspective

Morocco is facing challenging times in reaching its aspiration to become a top-20 tourism destination by 2020. After succeeding Vision 2010, Vision 2020 aims at attracting 20 million visitors per year. However, tourist arrival numbers witness a slowdown: it doubled between 2000 and 2010 and only increased by 10 per cent between 2010 and 2015 (4.27 ml. in 2000, 9.28 ml. in 2010, and 10.18 ml. in 2015) with even a downfall of 1 per cent between 2014 and 2015. The decline in tourist arrivals could be due to a number of intermediate factors. Recent years have seen Morocco struggle with different issues, such as the Eurozone crisis and regional instability due to the Arab Spring in Tunisia, Libya and Egypt. Most tourist arrivals come from Europe and tourists evaluate the perception of Morocco within a region of North Africa. For the Moroccan government it seems rather difficult to influence this image and as a result seeks for alternative markets outside Europe, particularly Brazil, China, Russia and Turkey. Morocco is endowed with a rich and diverse range of cultural heritage, especially the walled medina's in terms of cultural heritage, which has a huge potential for tourism.

1.2 Tourism and cultural heritage

Cultural heritage, urban historic landscapes, leisure, and tourism are strongly interrelated phenomena (Herbert, 1995; Khirfan, 2014). Research has shown that cultural heritage plays an important role in the decision choices of tourists (e.g. Zeppel and Hall, 1991; Silberberg, 1995; Carson *et al.*, 2002; Timothy, 2011). Cultural heritage is recognized as a valuable asset for the citizens as well as for the visitors of a specific area. In many countries, national, and local authorities spent considerable time and budgets to maintain and develop their cultural heritage. Visitors to such sites are a significant source of revenues for the protection and development. From an economic perspective, cultural heritage can be considered as a capital good (Rizzo and Throsby, 2006). This cultural heritage capital may be seen as an asset with high potential economic value (Ashworth and

Voogd, 1986). The tourist sector is largely depending on the visitor's appreciation in terms of artistic, ethical, historical, cultural, and emotional value for these ancient cultural objects. By tourism, the emphasize lies mainly by visiting the historical site. The generated value of such visits, and the thereby related public acknowledgement and appreciation, is of great importance for the tourist sector and the local economy (Brau *et al.*, 2003). Although, there is width recognition of the broader economic value of cultural heritage under scholars and policymakers, quantitative studies which focus on the valuation of cultural heritage from a tourist perspective are rather limited.

Nowadays places and, more specifically, destinations as places to serve as (economic) magnets for tourism (Buhalis, 2000; Morgan *et al.*, 2004) increasingly compete to attract more visitors, residents, events, investments, and companies (El Aouni *et al.*, 2013). In historic cities, urban tourism is an established phenomenon, and contemporary policy is often concerned with sustainable tourism and minimizing the negative effects of tourism (Roudies, 2013). While the challenges of coping with the ever-growing demand in historic cities has been influential, Selby (2004) stated that "in many cities there has been a proactive strategy of attracting more tourist". Even conservation and preservation of cultural heritage are important priorities, the need to improve access and promote heritage sites to paying consumers is in many cities the predominant motivation (Selby, 2004). In an increasingly 'shrinking' world, huge competition between cities is a driving force to stimulate strategic policy measures to attract more visitors and to enhance operational city management to ensure tourist satisfaction.

1.3 Aim and structure of the paper

In the present study, we examine how Morocco can overcome the challenges of reaching 20 million tourist visitors by 2020, by providing opportunities based on urban tourism. In Section 2, we provide a brief overview of the Moroccan 'walled cities', their identity, and how they were shaped by multi-layered environments. In Section 3, we take a close look at the relationship between globalisation, urbanisation, world cities, urban tourism, medina's, cultural heritage and how these aspects are related to the role of walled medina's in (urban) tourism and regional development for Morocco. In Section 4, we summarize the value of 35 medina's as an indicator for the tourism potential. We thereby follow two empirical approaches. Based on the '*Medina Tourism Potential index*', we score each medina. Another approach is to subtracted information from tourism accommodation websites. Here we contrast the old economy against the new economy. Finally, in Section 5, we will draw some concluding remarks on how these opportunities can be put in practice.

2. MOROCCO'S WALLED MEDINA'S AND UNESCO HERITAGE SITES

2.1 Introduction

The kingdom of Morocco, locally known as 'Al-Mamlakah Al-Maghribiyah' (or more shortly, Al-Maghrib), has a large variety of cultural heritage sites with archaeological and architectural value. To estimate the value of cultural heritage, and to define their relevance for tourism, it is very important to include and to understand the historic development of a country. Till the French Protectorate in 1912¹ ², Morocco has been ruled by several Dynasties, including the Idrisiden, the Fatimiden, the Maghrawaden, the Almoraviden, the Almohaden, the Meriniden, the Wattasiden, the Saadi, and finally the Alaouiten. During this period, there have been 4 empirical capital cities: Fez, Marrakech, Rabat, and Meknes. To be complete, we also add Volubis, Oujda, and Aghmat, which were briefly occupied by the Idrisiden, the Maghrawaden, and the Almoraviden (see Table 1).

Table 1: Overview of Dynasties and the empirical cities in Morocco (789 – present)

	Volubis	Fez	Oujda	Aghmat	Marrakech	Rabat	Meknes
Idrisiden	789 – 808	808 - 922					
Fatimiden		922 - 925					
Idrisiden		925 - 927					
Fatimiden		927 - 937					
Idrisiden		937 - 974					
Maghrawaden			994 - 1074				
Maghrawaden		1001 - 1040					
Almoraviden				1040 - 1060			
Almoraviden		1060 - 1062					
Almoraviden					1062 - 1147		
Almohaden					1147 - 1184		
Almohaden						1184 - 1224	
Almohaden					1224 - 1244		
Meriniden					1244 - 1253		
Meriniden		1253 - 1465					
Wattasiden		1465 - 1554					
Saadi		1465 - 1727					
Saadi					1627 - 1659		
Alaouiten					1666 - 1675		
Alaouiten							1675 - 1757
Alaouiten					1757 - 1912		
French						1912 - 1956	
Alaouiten						1956 -	

Some of these Dynasties played a pivotal role in the development of cultural heritage in Morocco, especially in the development of the current old (empirical) cities, also called 'medina'³ ⁴. As stated

¹ The French protectorate (1912-1956) occupied 90 per cent of the Moroccan territory, the Spanish protectorate (1912-1956) occupied the remaining 10 per cent with the city Tetouan as capital. Since 1497 and 1668 respectively, 'Melilla' (a territory measuring 12.3 km²) and 'Ceuta', (19 km²), form the Spanish enclaves of the Moroccan coast.

² The Portuguese are documented to have seized 6 Moroccan cities and built several stand-alone fortresses on the Moroccan Atlantic coast line. The 6 cities were: Ceuta (1415-1668), Tanger (1471-1661), Asilah (1471-1549), Ksar es-Seghir (1458-1550), Azemmour (1513-1541) and Safi (1488-1541). In some cases, castles were built immediately, such as in Graciosa (Larache) in 1489, Santa Cruz do Cabo de Guer (Agadir) in 1505; Mogador (Essaouira) in 1506; probably in Ben Mirao (Immourane, between Santa Cruz and the cape itself) in 1507; Mazagão (El Jadida) in 1514, and Aguz (Souira Qedima) in 1519. There was also an unsuccessful attempt to conquer 'S. João de Mamora' (El-Mehdiya) in 1515, as well as a failed plan for the establishment of 'Anafé' (Casablanca), back in the late 1460s (e.g. Cohen and Eleb, 2003; Correia, 2008, 2013, 2014; Elbl, 2013; Honnor, 2012; Oliveira *et al.*, 2010; Sarmiento, 2012; Silva *et al.*, 2010; Redman, 1986).

³ The word 'medina' itself simply means 'city' or 'town' in modern day Arabic. The 'medina' is the old historic part of a town divided into Quartiers. Each quartier has a mosque, a hammam, a communal bread oven, a madrasa, and a water fountain which serve that community.

⁴ The terms 'historic towns' and 'Medina's' are sometimes used interchangeably. The 'Medina' has been defined by the High Commissioner for Planning (HCP) in 1999 as "a group of urban neighborhoods of Precolonial origin, and initially surrounded by ramparts." See Bigio and Licciardi (2010).

by the Bigio and Licciardi (2010) “these medina’s carry a unique signature and value for Morocco, the Arabic region, and the rest of the world, but such significance is not always reflected in urban policies”. A ‘medina (quarter)’ is a distinct city section found in many North African cities. A medina is typically walled and consists often of a complex network (labyrinth) of narrow streets which can be less than one metre wide and are in general car-traffic free. It often contains historical architectural constructions like palaces, mosques, and other monumental buildings. The combination of these typical feature makes them unique among other densely populated urban areas. Moreover, these narrow street designs were also used to confuse and slow down invaders. This structure has also a downside. A study from Transitec (2012) has shown that accessibility is one of the main problems in the medina’s: transport of goods and materials represents a major urban mobility challenge for the medina users. Many essential public urban services cannot always be accessed. Even the number and quality of services are inferior than those in other urban areas (Godin and Le Bihan, 2012).

2.2 The value of cultural heritage

Global cultural heritage represents the great collective accomplishments of our human history. The UNESCO’s World Heritage program, as an international instrument, has emerged out of fear that important spaces and places, in terms of outstanding universal values, were eroding and eventually disappearing due the rapid progression of our modern society (Houdek, 2014). This global community approach transforming local monuments into World Heritage sites through institutionalized practices and ‘museological’ processes in terms of the identification, justification, nomination, inscription, cataloguing, preservation, restoration, protection, conservation, presentation, consuming, monitoring, and periodic reporting of heritage sites⁵.

The research field on the values and economics of cultural heritage has a long history (e.g. Ashworth and Voogd, 1986; Carnegie and Wolnizer, 1995; Mazzanti, 2002; Noonan, 2003; Hassan, 2003; Tuan and Navrud, 2008; Safiullin *et al.*, 2014). Torre (2002) stated that traditionally “the cultural heritage (research) field was relatively isolated and mainly consists of small groups of specialists and experts..., they determined what constituted cultural heritage and how it should be conserved”. However, the last decade, it has attracted a broad group of researchers from different fields and backgrounds. Within a country, or even on a global scale, ‘value’ is the central theme in the protection and maintenance of cultural heritage and archaeological sites. The value of ‘*cultural heritage*’ can have multiple meanings and is, for example, by the UNESCO divided in different

⁵ In this context, it is important to notice that all heritage is a spatial phenomenon, which includes location, distribution in terms of density and diversity, and exists within a hierarchy of spatial scales (local, regional, national, continental, and international) (e.g. Graham *et al.*, 2000). Due these global extensive processes of heritage place-making campaigns, sites becomes isolated from their original context and are re-shaped into another node of the UNESCO heritage network. Next to that, it is also has a sense of time (Ashworth and Graham, 2005).

categories.⁶ It can also be analysed from several perspectives (e.g. user, cultural, artistic, architectural, archaeological, aesthetic, ethnological, anthropological, spiritual, religious, political, socio-economic, market, scientific, and historical), studied on different scales (local, regional, national, and global), and it can even represent different cognitive states (emotions, experiences, appreciation), and cognitive values (e.g. symbolic, status). These examples show the large variety of 'value' propositions. It is clear that for scholars and professionals, there is no shared consensus or terminology on the term 'value' for cultural heritage. "There is also a lack of recognized and widely accepted methodologies for the assessment of cultural values, as well as the difficulties of comparing the results of the different assessments" (Torre, 2002). The term 'cultural heritage' encompasses several categories of heritage and also has many different definitions (Jokilehto, 2005). For example, the European Union (2005)⁷ defines cultural heritage as "a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time".

The economic and socio-cultural perspective (of the value) of cultural heritage, are the two major and most studied categories in this research field. However, as stated by Torre (2002): "the economic theories and assessment tools are the most developed and widely accepted." Historically, tourism has played a pivotal role in the development of such theories, especially because tourism is often regarded (by governments) as a potential source of rapid economic growth and as one of the development instrument of a region (Lundberg *et al.*, 1995; Vanhove, 2005; Giaoutzi and Nijkamp, 2006; Chen and Chiou-Wei, 2009). Thereby, it is important to notice that there are also many studies focussing on the adverse effects of tourism on landscape quality, environmental conditions, and cultural heritage (e.g. Butler, 1991; Mihalič, 2000; Russo, 2002; Tweed and Sutherland, 2007).

2.3 Cultural heritage, walled medina's, and multi-layered environments

Historical city centres are often be seen as important 'magnets' in the provision of tourism services to visitors and to specific areas. As stated by Creighton (2007): "Walled urban settlements (towns and cities) represent a quintessential form of cultural heritage and feature prominently on the list of UNESCO World Heritage Sites". Globally, this distinctive group of walled heritage city sites comprises well over 100 of the 644 cultural properties on the UNESCO list (Krogius, 2011). Moreover, for countries such as Albania and Yemen 'walled towns' represent the only category of the UNESCO list. Many of them are hundreds of years old and have several historical layers. They also show the

⁶ Such as tangible movable cultural heritage (e.g. paintings, sculptures, coins, manuscripts), immovable cultural heritage (monuments, archaeological sites, and ancient medina's), underwater cultural heritage (shipwrecks, underwater ruins and cities), intangible cultural heritage (e.g. oral traditions, performing arts, and rituals), and natural heritage (which concerns sites with natural sites with cultural aspects such as cultural landscapes, physical, biological, or geological formations).

⁷ <http://conventions.coe.int/Treaty/en/Treaties/Html/199.htm>

influence of several empires with related culture during different time periods. Furthermore, Creighton (2007) highlighted that “the identities of walled heritage cities are ‘multi-layered’ and are far from static, being susceptible to re-invention” (see also Bruce and Creighton, 2006).

This complexity of the ‘multi-layered’ and dynamic landscape of the post-modern city, and the ways in which a city is viewed, understood, studied, and constructed, has been extensively described by Thompson (2000). For centuries, people have moved from country to country seeking for a better life. Also, human conflicts, and natural and epidemic disasters, are important factors in this (global) migration. Obvious illustrations of multi-layered cities are population diversity, multiplicity, diaspora, social polarization, multiculturalism, but also emergence of ethnic communities and minority groups. Examples from an economic perspective are the post-industrial revolution, economic development, internationalism, globalisation, immigration, and even colonization. This has a direct impact on the social and spatial structure of a city in terms of urban planning, urban renewal programmes, and city development (e.g. urban sprawl, poly-nuclear structures of cities, polycentric urban patterns, the emergence of outer urban poles, and the dynamic space of urban peripheries) (El Bouaaichi, 2013; Savani, 2014). To understand any contemporary city, patterns of cultural diversity and its related dynamics can only be enhanced by looking at the history of migration and are ultimately the result of the current habitants and their ancestors. This includes looking at economic changes of a city as well as contemporary socio-cultural factors (Thompson, 2000): 1) the age of migration and multicultural citizenship; 2) the age of post-colonialism and the claiming of land by indigenous people, and 3) the rise of civil society and the age of minority.

These different (historical) aspects of multi-layered landscapes are also relevant for the ‘walled cities’ in relation to the value, preservation, and appreciation of cultural heritage. For example, multiculturalism is embodied in the following principles (Office of Multicultural Affairs, 1989): “cultural identity (the right to express and share cultural heritage, language, and religion), social justice (the right of all citizens to equal treatment in all the spares of life), and economic efficiency (the need to capitalize on skills of all citizens, regardless of their background)”. Researcher need to include both the (historical shaped) multi-layered city diversity, as well as the complex interplay between different social groups and individuals which inhabited the city, the different stakeholder in tourism management, as well as (the background of) the tourists who visit the cultural heritage. In the next section, we will take a closer look at the link between multi-layered landscapes and diversity of urban tourism.

3. WORLD CITIES, URBAN TOURISM AND CULTURAL HERITAGE

3.1 World cities and urban tourism

The world's population is increasingly urbanizing and is expected to grow to 61 per cent by 2030 according to the UN (United Nations, 2009). The relationship between globalization (see International Monetary Fund, 2000) and (urban) tourism has been extensively studied (e.g. Meethan, 2004). In this context, one of the main contributions to understand urban change due to this globalization process emerged from the notion of the concept of 'world cities' (Hall, 1966; Pacione, 2005; King, 1990), which can be considered as important economic hubs, that dominate the world business, and serve as gateways to their own national tourism system. In this context, world cities function in hierarchical structures within and across geographical boundaries (Maitland and Ritchie, 2009). Sheller (2004), for example, argues that 'contemporary networked (world) cities are made up by flows of people, vehicles, and information'. The importance of the relationship between these world cities can also be identified in the concept of Smart Cities. Nijkamp (2008) stated that smart cities consist of "geographical hubs (virtual and real) in a modern networked space-economy and will continue to be engines of economic growth, creativity, and innovativeness". In line with these urbanization, globalization, and smart city trends, urban tourism is an extremely and increasingly important worldwide phenomenon of tourism. King (1990), for example, has identified some main features of 'world cities' which have direct and indirect implications for urban tourism, and which also have its impacts upon small and medium cities.

Pearce (2001), stated that "the increased academic interest in urban tourism is related to the growth of tourism in cities". Another dimension of the growing scale of urban tourism research, is that there has been a relative proliferation of sub-themes within the domain of urban tourism research that has emerged since the 1990s (Ashworth and Page, 2011), which corresponds with the wider development of tourism research. They also highlight the multidisciplinary nature of urban tourism studies and that the different theoretical or conceptual constructs remain weakly connected.

Since the 1980s, urban tourism is a recognized important theme and exists as a distinct field within the tourism research discipline. A range of seminal papers (e.g. Ashworth, 1989; 2003) have critically reviewed the state of art and its progress towards a greater (scientific) recognition. Remarkable however, Ashworth (2003) stated that "those studying tourism neglected cities, while those studying cities neglected tourism".

Elementary and closely related research questions are why tourists are attracted to cities and who are the urban tourists (Ashworth and Page, 2011). Before answering such questions, we first need to define what urban tourism exactly means. Despite the 35 years of scientific recognition of this research area, urban tourism has remained only imprecisely defined and vaguely demarcated with little development of a systematic structure of understanding. Ashworth and Page (2011) highlights

that “a major difficulty that may account in part for the academic neglect of urban tourism has been the lack of a simple definition of a complex phenomenon and a clear demarcation of its diverse and vaguely formulated set of activities”. For example, a city has a concentration of wide range and a diversity of facilities and services which tourist can make an intensive use of. However, few of these has been specifically created solely for tourism purposes. Moreover, even the assumption that we can distinguish, isolate, and examine a distinctive urban tourist can be questioned. Ashworth and Page (2011) questioned for example what distinguish urban tourism, especially urban heritage tourism, from other forms of tourism, such as rural, mountain, seaside or many other geographically demarcated tourisms. They used the plural form of urban ‘tourisms’ to highlight the diversity of different clusters of urban features and contrast against other adjectival tourisms. They stated that all cities have a multifunctional nature, otherwise they would not be classified as cities. Hallyar *et al.* (2008) therefore concludes that “the exclusively tourist city or even tourist urban precinct does not exist, for if it did it would lack the diversity that is an essential urban characteristic”, which is the core of the relationship between the city and the tourist. Moreover, Ashworth and Page (2011) stated that “If tourists make use of almost all urban features, they make an exclusive use of almost none. Therefore, the understanding of urban tourism is dependent upon a prior understanding of the urban context in which it is embedded”. Moreover, cities are visited by tourists for multiple reasons, however cities which attract most visitors are large multi-functional entities. Another interesting observation from the study of Ashworth and Page (2011) is that they question if a tourist city even exists, and that even tourism impacts and its economic significance in general is mostly overestimated and less important than many other economic sectors within cities or other rural tourism activities. Based on the above observations, it is interesting to explore how cultural heritage, and more specially the walled medina’s districts can be positioned within the Moroccan urbanization trend and urban developments as a function to support urban tourism.

3.2 Urban tourism and Morocco’s walled medina’s

Morocco has a rich and diverse urban cultural heritage, including 35 medina’s, or ancient urban centers, often dating back to medieval times with a rich and multi-layered Arab Muslim traditions and intangible heritage (Bigio, 2012). Since the early 1980’s, tourism played a pivotal role in the (economic) development and preservation of the old medina’s. This effect has clearly increased during the last 3 decades, and has been largely influenced on the fact that tourists are sold some kind of ‘oriental dream’⁸ (Escher *et al.*, 2000; Escher and Petermann, 2000; Leroux, 2009; Demerdash, 2009; Minca and Borghi; 2009; Tebbaa and Skounti, 2011). Four imperial Moroccan cities of

⁸ Said contends that the ‘Orient’, as much as the ‘Occident’, “is not an inert fact of nature”. It is, rather, an “idea that has a history and a tradition of thought, imagery and vocabulary that has given it reality and presence for the West”. All this is not to say that the Orient is “essentially an idea, or creation with no corresponding reality” (Said, 1978).

Marrakech, Fez, Rabat and Meknès, as well as other historic cities with walled medina's, such as Casablanca, Tanger, Oujda, Essaouira, Tétouan, Ouarzazate, and El Jedida, rank in the top-twelve of tourist destinations in Morocco (Steenbruggen, 2016). In addition, the medina's of Marrakech, Fez, Rabat, Meknès, Tétouan, Essaouira, and El Jedida are accountable for 7 out of 9 of the World Heritage sites. In twentieth century, especially due the French and the Spanish Protectorate, the historical urban landscape of Morocco has changed dramatically into 'modern' urban settlements with the exception of the most isolated medina's. The core of this clearly visible change lies in the "combined pressures of demographic growth, urbanization, and the gradual modernization of the national economy" (Bigio, 2012). In a study of the Bigio and Licciardi (2010), they stated that these "historic medina's have evolved from self-sufficient cities to becoming central urban cores of much larger urban agglomerations". An extreme example of this urban change is Casablanca. As been nicely described by Puschmann (2009), "Casablanca is a demographic miracle on Moroccan soil"⁹. It can nowadays be considered as the 'cosmopolitan, industrial, and economic heart of the country'. However, the old medina of Casablanca is hardly known by tourists and even not promoted in recent place branding attempts (WeCasablanca, 2016).

The medina of Fez is one of the largest living medieval cities in the world (Carson *et al.*, 2002). The modern city of Fez, comprises three parts: 1) Old Fez (Fez el Bali); 2) New Fez (Fās al-Jadid), and 3) the 'Ville nouvelle' (Dār al-Dubaybagh), founded by the French about four years after the signing of their Protectorate in 1912). 'Fes el Bali' (with a total population of 156.000 and over 12.000 traditional houses which are partially surrounded by the ancient battlements), is considered as one of the largest car-free urban areas in the world (Xu, 2013)¹⁰.

Wagner and Mica (2014), for example, stated that "Rabat represents an example of how 'the colonial' (architecture and urban planning) are becoming 'heritage', that is, a new form of urban cultural capital to be valorised and somewhat reinvented in its spatial postcolonial realisations". The legacy of the urban planning during the French protectorate (by the colonial regent Louis H-G Lyautey), also had some negative effects, such as the process of creating separate zones (urban apartheid) for European and Moroccan residents (Abu-Lughod's, 1980).

Marrakech is a city in constant change (e.g. Lamzah, 2008). In 1913, during the French Protectorate, the modern part of Marrakech (Gueliz) was built. The ongoing 'process of urbanization'¹¹ (that started in the early French Protectorate) has not followed the same patterns of development

⁹ The population of the city impressively grows in one century, from 20.000 inhabitants (47 ha) in 1900 to 4.000.000 in 2000 (98.000 ha).

¹⁰ Thereby it is important to notice that 'Fez el-Bali', under the 'Idrisiden' Dynasty, originally comprises two distinct areas (twin medina's 'Madinat Fez al-Qarawiyyin' and 'Adwat Al-Andalus') separated by a tributary of the 'Jawhar' river. Both sides were walled, autonomous, and developed separately (O'Meara, 2004). During the mid-eleventh century, both cities were expanded and the separate build sites became one medina, and were definitely enclosed with one perimeter wall during the 'Almoraviden' period (1069-1146).

¹¹ "The annual population growth in Marrakech is approximate 2.4 per cent. The housing crisis that results from these different forms of urbanization has affected different social groups unevenly. The absence of urban policies and adequate interventions has raised a series of problems, which have led to continuously declining living conditions for a great number of urban inhabitants" (Ait Hassou, 2011).

throughout the city space, which also characterize spatial and social diversity, which reflects the various interventions carried out over time by multiple actors (Bigio, 2010; Ait Hassou, 2011). Escher and Petermann (2000) stated that “after the end of the French protectorate in 1956, the Moroccan upper and middle class left the old town, and a poor rural population spread into the medina¹².” Gentrification (the upgrading of a neighbourhood or district in the social, cultural, and economic fields) took place in the old medina of Marrakech (Escher *et al.*, 2001; Escher and Petermann, 2000; Tebbaa and Skounti, 2011) en Fez. This can be considered as a modern phenomenon of the multi-layered city. For an extensive overview of the impact of the French Protectorate on cultural heritage management in Marrakech, we refer to Lamzah (2008). In 1985, the cultural importance of the old medina of Marrakech was recognized by the UNESCO and was added to the world heritage list¹³. Nowadays, Marrakech is depending largely on its tourism industry. Tourism has brought employment to the area, but it has also led to an oversupply of workers because of a lack of control (Ait-Hassou 2011).

The radical urbanization trend caused that the ancient medina’s nowadays only represent a very small fraction of the much larger urban agglomerations. They can also be considered as cities within cities. For example, in 2004 they only had around 740,000 residents in total, which is approximately 2.5 per cent of the national Moroccan population (Bigio and Licciardi, 2010). For instance, the population of Casablanca represents only 1 per cent of the agglomeration, Tangier 2 per cent, while in the case of Fez, one of the most populated medina’s, the percentage is only 12 per cent. Other extremes are Moulay Indriss with 40 per cent. Even in smaller and less known places like Azemmour, the old medina is now part of a larger urban agglomeration (Godin and Le Bihan, 2012). In contrast with the main Moroccan cities, such places lack diversity, which is an essential urban feature to attract large number of urban tourists. Even the medina’s are nowadays from a psychological perspective a small geographical part of these urban agglomeration, they represent pride of a collective belonging and with its rich and distinctive history, tradition, culture, and mythologies of oriental exoticness, they embody the heart of western orientalist imagery of Morocco. Therefore, Edwards (2005) notes that the Moroccan tourism industry has “generally adopted the strategy of performing the stereotypes and profiting off the performance”. Through all this change, however, Balbo (2012) stated that “the most cherished sites of Moroccan cities and the most valuable religious and secular monuments of the past are still the ones located in the historic towns, or medina’s, which in many respects constitute the ‘soul’ of Morocco and are just at the core of its national identity”. Here, the

¹² In the past, different approaches have emerged, such as gentrification (to tackle urban poverty and spatial inequality), urban restructuring by socio-spatial arrangements, neoliberal urban developments with more elite driven priorities, and urban landscapes as spaces of power dominated by capital and state institutes, as a form of ‘new urban colonialism’ (e.g. Escher *et al.*, 2001).

¹³ “The nomination has led to the accelerating gentrification of the medina. It is said that soon the intangible heritage of the medina is only an object of monetary aspirations. The new status has helped to improve the built surroundings of the medina, but the immaterial aspects have not gained in quality” (Tebbaa and Skounti 2011).

ancient medina's forms the center of a mythical Morocco and are thus a core asset for tourism. In the next Section, we will provide a brief overview of the most important heritage sites in Morocco. We thereby include locations which have the UNESCO status and which play an important role in tourism, or are relevant for the identity of Morocco as a tourist destination¹⁴.

4. MEDINA'S AND TOURISM POTENTIAL

4.1 Morocco's walled medina's

The ancient medina's are endowed with a rich and diverse cultural heritage and are multi-layered. Fethi (2004) stated that "the estimated number of historic cities (or distinct urban cores) that survived in the Arab world, with varying states of conservation, is probably around 200-250". Many North African and Middle East cities, including Morocco, feature historic city centers which reflect the heart of Arab civilization, and find their origins in pre-islamic and medieval times (Boussaa, 2004). In this paper, we analyse 35 cultural heritage sites. In Morocco, there are in total 7 ancient medina's, 2 other historical sites, and 6 intangible cultural assets included on the UNESCO's world cultural heritage list. There are also 5 other locations which are nominated to be added to the UNESCO's heritage list. These sites are mentioned on the so called tentative list. In Figure 1, we provide an overview of the geographical location of the medina's as described in this paper.

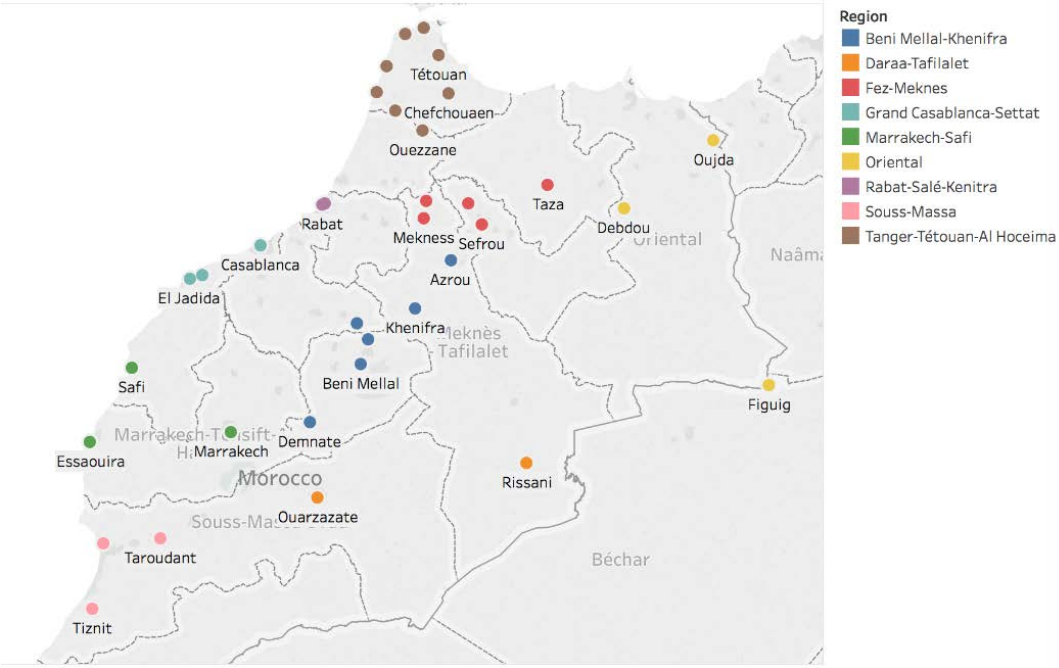


Figure 1: Geographical overview of the analysed medina's in Morocco.

¹⁴ Each site is relatively independent from each other. However, the urban agglomerations of the walled medina's and spatial dimensions of a county also create some kind of interconnectivity between places, in terms of density, proximity, accessibility, economic activity, social clusters, administrative relationships, and flows of people and goods.

As stated by Bigio and Licciardi (2010): “Medina’s are the physical representation of social and cultural identities that are at the origin of the Arab world”. However, in the last fifty years, they have also experienced a “rapid physical and social decay due a combination of abandonment by part of their original population, a rapid urban growth of modern neighbourhoods, an impact of a high urbanization density, or the loss of their economic function” (Bigio and Licciardi, 2010).

4.2 The Medina Tourism Potential index

The medina’s and other heritage sites in Morocco can be considered as a strategic asset and can thus play a significant role in expanding tourism revenues by attracting international tourists. In a study conducted by the Bigio and Licciardi (2010), they defined a ‘*Medina Tourism Potential index*’ (MTPI). This index should be seen, as a useful checklist to objectively analyse and rank these cities, which also integrates the rehabilitation of ancient cities and tourism development which can lead to economic growth. This index contains eight criteria: 1. classification on the UNESCO World Heritage List, 2. significance of cultural heritage assets, 3. proximity to the coast, major natural features, or other cultural heritage sites, 4. proximity to existing tourism destinations, 5. accessibility, 6. accommodation facilities, 7. organization of cultural events, and 8. high-level handicraft industry.

In Appendix 1, we provide an overview of how the medina’s are ranked based on the MPTI (e.g. Bigio and Licciardi, 2010; Bigio, 2012). The analyzed medina’s are clustered into 9 regional basins (based on the new administrative regions 2015). It’s clear that each medina has its own characteristics, history, population size, economic and social activities, and regional interdependencies. There are 3 cities which have the maximum score of 8. Marrakech and Essaouira (located in the same region) are both in the top 12 with the highest number of overnight hotel-stays in 2015. Tétouan has an acceptable number of tourists, however it’s tourism potential could be further developed. Especially in terms of accommodation facilities, restaurants, and things to do. While Fez, Mekness, Larache, Rabat, El Jadida have the same score, Fez is for example a much more important destination than Mekness. And the coast cities Rabat and El Jadida have a much higher number of visitors than Larache. However, Larache could greatly benefit from the nearby seaside resort Lixus. Places, like Moulay Idriss, Asilah, Azemmour, and Taroudant and could benefit from a more regional marketing approach.

4.3 Index based on tourism accommodation websites

Another approach to identify the current and potential use of the medina’s, is to subtracted information from tourism accommodation websites (Gretzel *et al.*, 2015). In appendix 2, we provide an overview on how the Morocco medina’s score on different aspects. The dataset used for the analysis consists of data manually scraped from three major online internet platforms that naturally

capture information about the intensity and the qualities of touristic activity on the ground. We therefore use 3 information sources: Booking.com (b2c), TripAdvisor.com (b2c), and Airbnb.com (c2c). We first will look at the old economy approach (b2c). In Figure 2, we cluster the information of the 35 medina’s into the region’s they represent. We thereby make a distinction between the availability of accommodation (property, hotels, and rentals) and the attractiveness (restaurants and things to do). As clearly visible, region Marrakech-Safi (which includes Marrakech and Essaouira) is the most important tourist destination. Remarkable is also the contrast with the region Grand Casablanca-Settat, and especially Casablanca with much more restaurants (780) than things to do (215), which has thus a much more business-oriented character. Also, the regions Fez-Mekness and Tanger-Tétouan-Al Hoceima scores good, however, they have a slightly different profile in terms of accommodation and attractiveness. The region Souss-Massa is mainly represented by Agadir as an important tourist destination. The same holds for the region Rabat-Salé-Kenitra, where the imperial city of Rabat is the main attraction. Clearly, the region of Beni Mellal-Khnifra, and the more isolated regions Oriental and Draa-Tafilalet has a less developed urban tourism infrastructure.

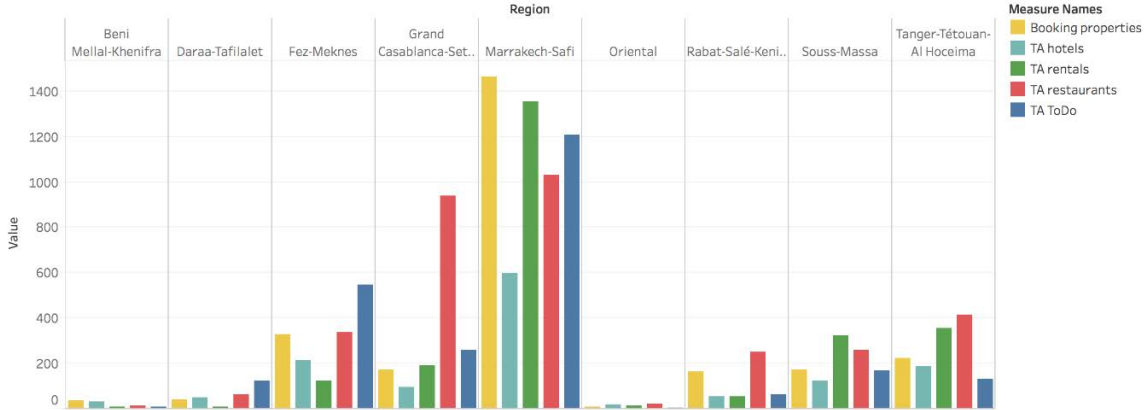


Figure 2: Overview available properties, hotels, rentals, and things to do per region.
 Note: Data accessed from www.Booking.com (Booking) and www.TripAdvisor.com (TA) on 17 September 2016.

Another interesting residential tourism trend, which can be seen as the new economy, are the locations from website www.Airbnb.com which are offered by consumers for consumers (c2c) (e.g. Guttentag, 2015; Oskam and Boswijk, 2016). Figure 3 presents the numbers per region. It’s obviously that the locations from Airbnb outnumber the accommodations from Booking and TripAdvisor.

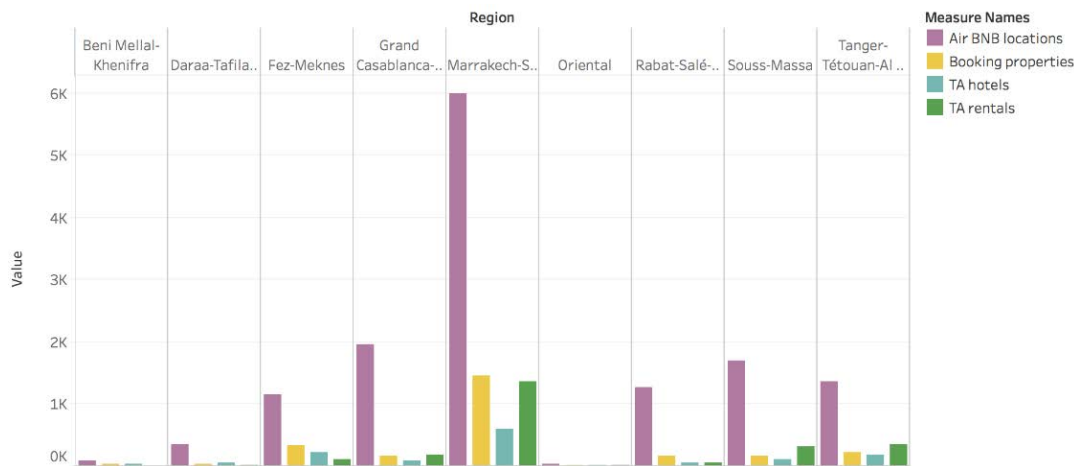


Figure 3: Overview available locations, properties, hotels, rentals per region.

Note: Data accessed from www.Booking.com, www.TripAdvisor.com (TA) and www.Airbnb.com on 17 September 2016.

In all regions, the number of Airbnb locations (new economy) is higher (>1) than the sum of the number of assets from Booking.com and TripAdvisor.com (old economy) (see Table 2). The regions Fez-Mekness, Marrakech-Safi, and Tanger-Tétouan-Al Hoceïma scores approximately the same (1.7 - 1.8). They all have 2 cities (with an old medina) which are listed in the top-twelve of the highest number of tourists per year. We can conclude that these regions already have a relatively stable tourism infrastructure in terms of accommodations and facilities. The regions Rabat-Salé-Kenitra, Grand Casablanca-Settat, Daraa-Tafilalet, and Souss-Massa scores much higher (2.8 - 4.6). This might be a signal that the traditional tourism infrastructure is not in line with the actual demand. Another strange observation from appendix 1 is that Essaouira (417,601) and Oujda (414,755), have approximately the same number of overnight hotel-stays for 2015. However, there is a significant difference in the sum of offered accommodations (1,574 and 72).

Table 2: Overview of the relationship between C2C (new economy) and B2C (old economy) per region

Region	Beni Mellal-Khenifra	Daraa-Tafilalet	Fez-Meknes	Grand Casablanca-Settat	Marrakech-Safi	Oriental	Rabat-Salé-Kenitra	Souss-Massa	Tanger-Tétouan-Al Hoceïma
Air bnb	101	361	1,152	1,965	5,994	43	1,263	1,705	1,364
Booking-TA	75	101	666	463	3,416	42	276	619	768
Ratio	1.3	3.6	1.7	4.2	1.8	1.0	4.6	2.8	1.8

Note: Data accessed www.booking.com, www.TripAdvisor.com, and www.Airbnb.com on 17 September 2016.

Also the total number of offered accommodations in a place and the corresponding average price tells something about the popularity of a city. In Table 3 we present these numbers per region. It is clear that Marrakech-Safi is the region with the most popular medina's. However, Marrakech for example, differs much from Essouirra, even if they are both in the top-twelve of most visit places.

Table 3: Overview of number of locations and the average prices of Air BNB locations per region

Region	Beni Mellal-Khenifra	Daraa-Tafilalet	Fez-Meknes	Grand Casablanca-Settat	Marrakech-Safi	Oriental	Rabat-Salé-Kenitra	Souss-Massa	Tanger-Tétouan-Al Hoceïma
Average price (euro)	61	39	52	63	95	42	59	57	66
Number locations	101	361	1,152	1,965	5,994	43	1,263	1,705	1,364

Note: Data accessed www.Airbnb.com on 17 September 2016.

Due the global urbanization trend, medina’s represent a very small fraction of the much larger urban agglomerations. This urbanization trend is also visible in the census information (1994 -2004 - 2014) as presented in Figure 4. Remarkable, Rabat is the only city in Morocco which had an decrease in population between 2004 - 2014. It is also clear that Casablanca is far out the largest city in Morocco. The number of reviews (on TripAdvisor) says also something about social activity and the connection with a place. This also demonstrates that the region Marrakech-Safi is the most popular tourist destination (see Figure 4).

In comparison to the ‘Medina Tourism Potential index’ (see Appendix 1), information subtracted from 3 major tourism sites (see Appendix 2) can provide important additional insights which are very useful to define new policy measures and place branding methodologies to attract more tourist, with a special emphasize on regional development and diversity of tourism assets.

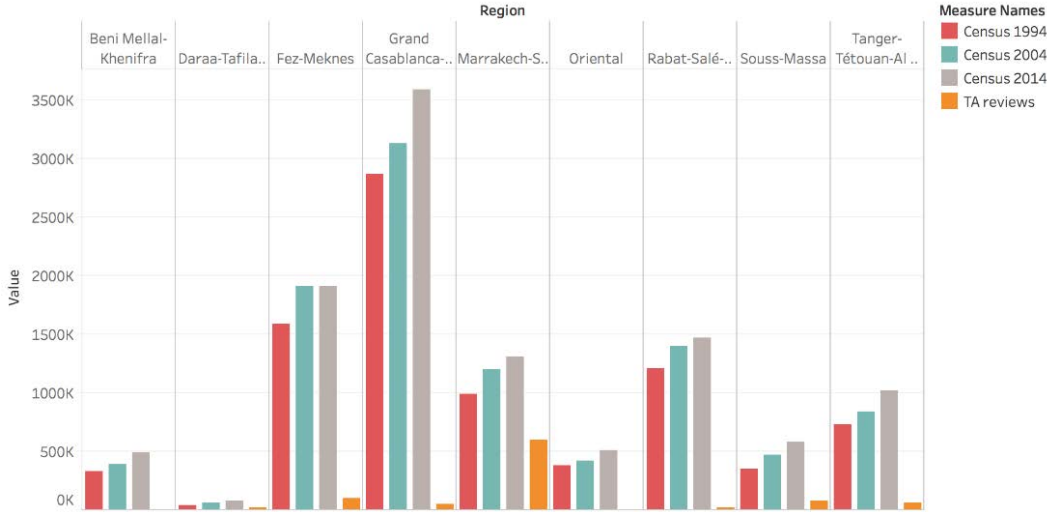


Figure 4: Overview sum of medina Census information (1994, 2004, 2015) and the number of reviews per region. Note: Data accessed www.TripAdvisor.com (TA) on 17 September 2016.

4.4 Cluster analysis

For a more advanced analysis, we use the aggregate data presented in appendix 2. The dataset consists of data collected from three major online internet platforms that naturally capture information about the intensity and the qualities of touristic activity on the ground. These are Airbnb, Booking, and Tripadvisor. The aggregate data presented here was collected at the end of 2016. We collect the information in a matrix with 35 rows (corresponding to the medina’s), with 7 aggregate tourism-related features at each row (see appendix 2). These are: Airbnb # of locations; Booking # of properties; Tripadvisor # of hotels; Tripadvisor # of vacation rental houses; Tripadvisor # of restaurants; Tripadvisor # of reviews, and; Tripadvisor # of things to do.

All the features extend through several orders of magnitude in the group of 35 medina’s, hinting at a power-law type of distribution (although the number of data points here is too small to actually quantify the exponents of the power law). There is a discussion in literature on the size, scale, and

shape (geometry, morphology, complexity and form) of cities (e.g. Batty and Longley, 1994). Cities are complex systems, and our understanding of how they evolve is still in its infancy (Batty, 2008; 2009; 2011). Batty (2008) stated that “the processes that drive agglomeration and clustering in small cities are similar to those in large cities; indeed in cities of any size”, following well-defined scaling laws, and could be approximated from log-normal distributions (e.g. Gibrat, 1931). Research on scaling of cities have taken economic developments, such as firm sizes and incomes as key exemplars. The tourism industry is seen as a key contributor to economic development of cities, thus one might expect that such scaling effects would also be visible in tourism related features. An interesting observation is that cities also can be regarded as organic (or cellular) entities (Batty, 2005). Power-law relations between basic variables (related to the growth cities by log-size log-rank) indicate ‘organic growth’ processes, as expected (Gabaix, 1999a; b; Salinger and West, 1999; Jiang and Tia, 2011; Cristelli *et al.*, 2012). Figure 5 shows a 3d log-log-log plot of the # of hotels, # of restaurants, and # of reviews of the medina’s from TripAdvisor data.

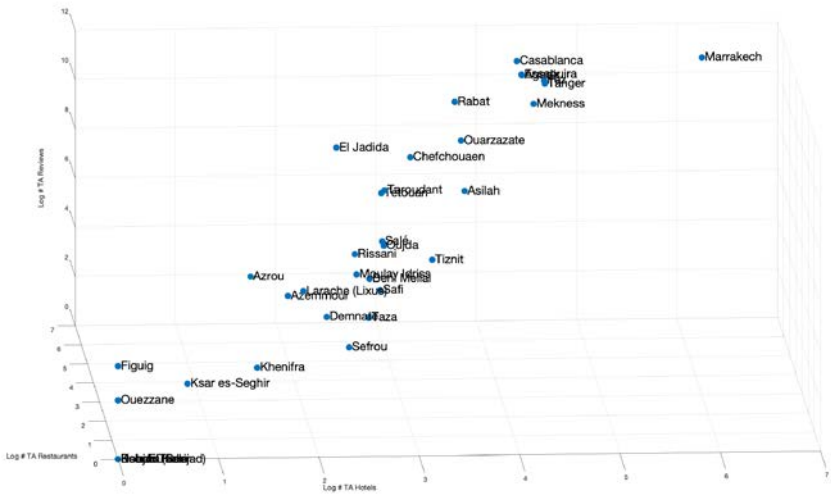


Figure 5: Log plot of Morocco’s medina’s based on TripAdvisor. We see clearly that the medina’s form a quasi-linear sub-manifold in the 3d log plot, indicative of a power-law distribution for the size of touristic activity.

Our goal is to analyse the data in a way that reveals natural groupings or patterns in the touristic activity of the medina’s¹⁵. Since the number of the medina’s is relatively small (35) we apply clustering use k-means, after normalization and dimensional reduction of the data. Because of power law relations, the variables are related linearly in log-log scale, and so it is more natural to see the clustering in the logarithms of the features rather than the original values, where data points are as far as 5 orders of magnitude. Taking the logarithm spreads out the data points in clusters of relatively uniform density spanning a single order of magnitude in every dimension.

¹⁵ Clustering of medina’s can be done in different ways. Godin and Bihan (2012), for example, used a categorisation based on diversity: Urban, landmark, rural, coastal, large, and religious function medina’s.

To perform the clustering, we first pre-process the data, using normalization and dimensional reduction. Because of power law relations, the variables are related linearly in log-log scale, and so it is more natural to see the clustering in the logarithms of the features rather than the original values, where data points are as far as 5 orders of magnitude. Taking the logarithm spreads out the data points in clusters of relatively uniform density spanning a single order of magnitude in every dimension. As by standard practice, we then normalize the data to the $[0, 1]$ interval to avoid giving precedence to the features that are naturally numerically larger (e.g. number of reviews) in the distance-based clustering analysis. Finally, before the clustering we perform dimensional reduction. The purpose of this is double: On one hand, the variables we are using are all clearly correlated among themselves, since all of them are positively correlated to the overall size of touristic activity in the medina. So we would like to detect the combinations of variables that actually carry the most relevant information for clustering, instead of using the 7 raw variables. We start with 7 features that are clearly interconnected. Since the number of data points is relatively small, it allows the application of exact dimensional reduction. We use Principal Component Analysis on the 35x7 dataset to discover the main dimensions.

Table 4: Variance of the 7 features based on Principal Component Analysis.

Principal Component	Explained Variance (%)
1	89.91
2	2.76
3	2.49
4	1.73
5	1.60
6	0.96
7	0.56

We see that the first three dimensions already capture 95 per cent of the variance (see Table 4), and so we can safely limit the analysis to these 3, allowing us to plot the clustering completely in a 3D scatter plot. The resulting coefficients of the PCA can be seen in the table 5.

Table 5: Principal Component coefficients

Principal Component coefficients	1	2	3	4	5	6	7
Airbnb # of locations	0.31	-0.27	-0.02	0.33	0.80	-0.04	-0.28
Booking # of properties	0.36	-0.28	0.22	0.66	-0.41	-0.23	0.29
Tripadvisor # of hotels	0.34	-0.37	-0.13	-0.11	-0.17	0.83	0.01
Tripadvisor # of vacation rental houses	0.37	0.07	0.77	-0.34	-0.1	-0.05	-0.38
Tripadvisor # of restaurants	0.45	0.35	0.05	-0.24	0.3	-0.002	0.73
Tripadvisor # of reviews	0.41	-0.35	-0.48	-0.44	-0.18	-0.49	-0.12
Tripadvisor # of things to do	0.39	0.68	-0.34	0.28	-0.18	0.09	-0.39

The three first principal directions, which we retain for the rest of the analysis, have also a rather natural interpretation:

- First component (90 per cent explained variance): This direction has all coefficients positive and of similar magnitude, meaning that it essentially corresponds to the (logarithm of) the overall size of the medina's' touristic activity.
- Second component: This component has positive coefficients for features related to entertainment (restaurants, things to do), and negative coefficients for accommodation features. Medina's that are high in this dimension have a high ratio of entertainment activity to accommodation capacity.
- Third component: A high value in this component expresses a prevalence of vacation rental homes to other forms of accommodation and entertainment activity.

We then apply k-means to the dimensionally reduced 35x3 dataset, comparing different numbers of clusters using the sum of distances. The optimal number turns out to be 5. This optimal number of clusters is determined here by using the sum-of distances criterion, in which the average internal distance between the points of each cluster and its center are compared to the average distances of the points to the centers of the other clusters (see Table 6).

Table 6: Categorization of Moroccan Medina's based on K-means clustering approach

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Agadir	Asilah	Azemmour	Boujaad	Rissani
Casablanca	Chefchaouen	Azrou	Debdou	
El Jadida	Oujda	Beni Melal	Figuig	
Essaouira	Safi	Demnate	Ksar el Kbir	
Fez	Salé	Moulay Iddriss	Ksar es-seghir	
Marrakech	Taroudant	Khenifra	Ksbah Tadla	
Mekness	Tetouan	Larache	Ouezzane	
Ouarzazate	Tiznit	Taza		
Rabat				
Tanger				

To better interpret the results of the clustering, we codify them with a high(green)-medium(yellow)-low(red) categorization, according to the position of the center of each cluster in the corresponding principal component dimension (see Table 7). The positions can also be seen in the accompanying Figures 6a, 6b, and 6c).

Table 7: Codified interpretation of clustering related to Principal Component dimensions.

Cluster	Overall size	Ratio of <i>entertainment</i> to <i>accommodation</i>	Ratio of <i>vacation rental houses</i> to <i>hotels & entertainment</i>
1	High	High	High
2	Medium	Low	High
3	Medium	Low	Medium
4	Low	High	High
5	Low	Medium	Low

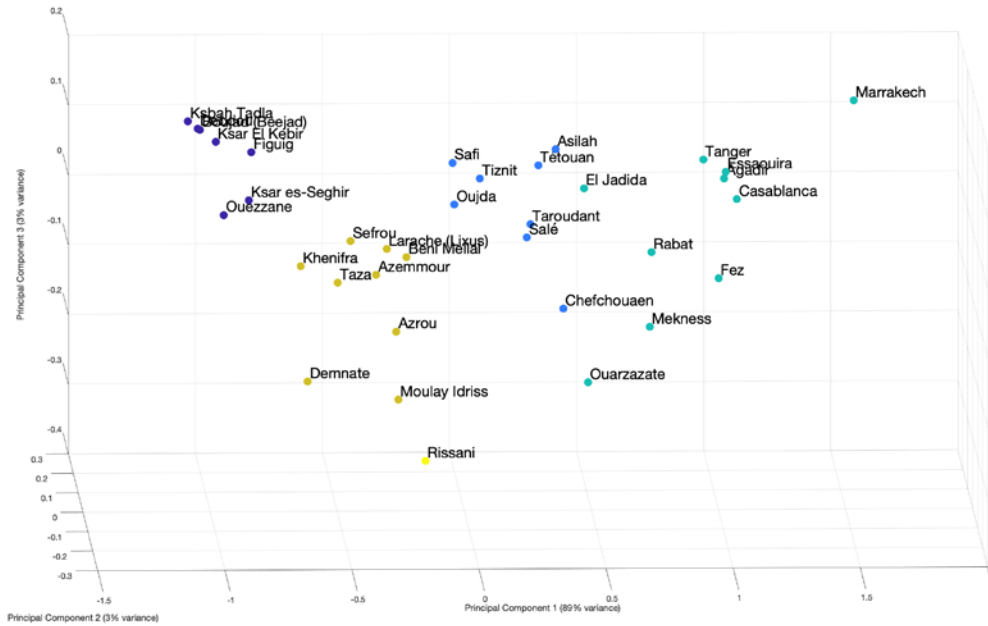


Figure 6a: In this figure we see the plot of the first three principal components. The five clusters can be clearly seen as groupings of the medina's in these 3 dimensions, which capture 95% of the variance of the dataset.

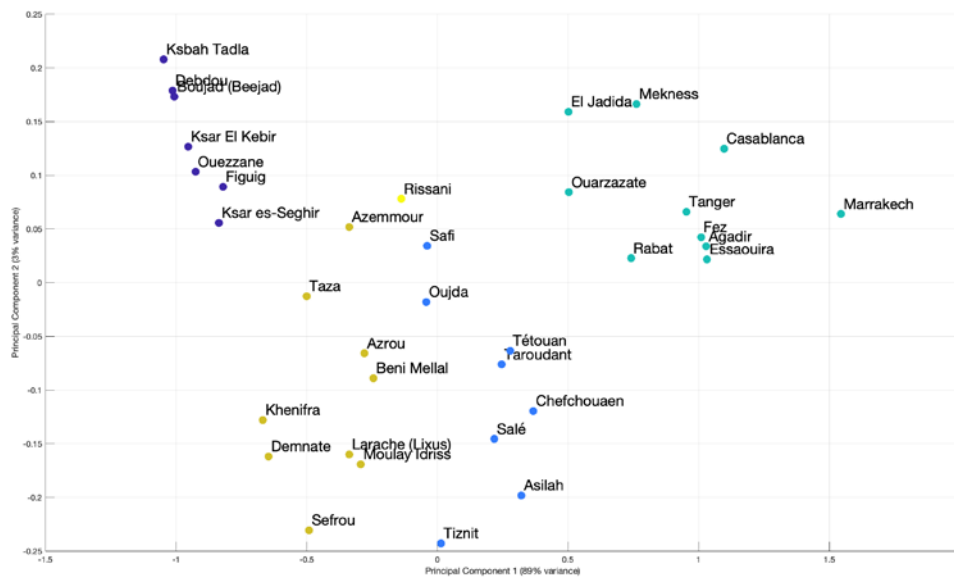


Figure 6b: Focusing on the second principal component, we notice an interesting phenomenon: Both the small and the large medina's score high on this component, which expresses the ratio of entertainment to accomodation venues. In contrast, the middle-sized medina's score low, having relatively more accomodation than entertainment infrastructure.

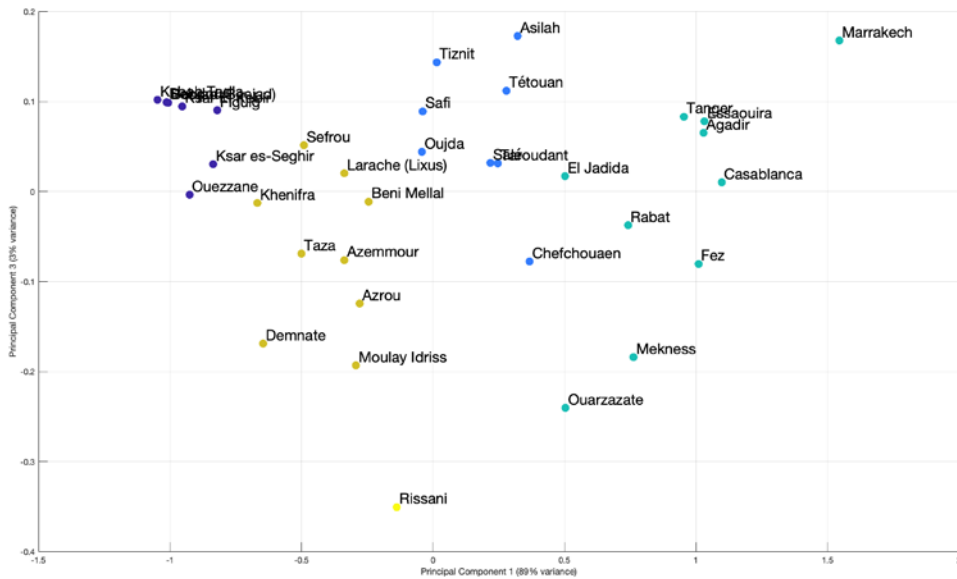


Figure 6c: A closer look at the third principal component shows that the middle-sized medina’s also show a high proportion of vacation rental houses compared to other accommodation types, in addition to the overall relative prevalence of accommodation venues compared to entertainment, as we saw in figure 6b. One should note that the medina’s’ touristic activity is of course correlated with the population. However, as can be clearly seen in the figure 7 below, the correlation is not tight. Medina’s at the same level of population can have very different levels of touristic activity, expressed here by the first principal component.

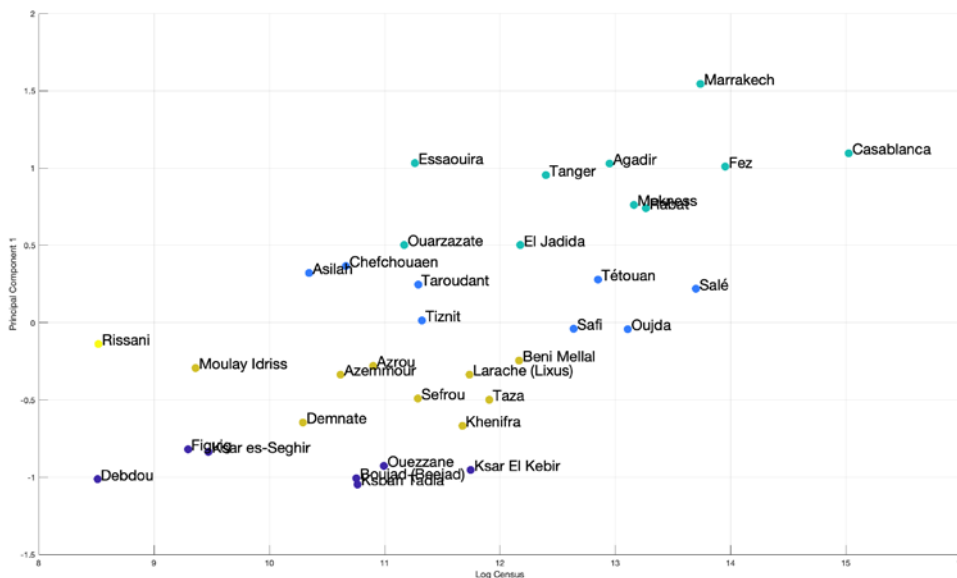


Figure 7: Plotting the first Principal component, which expresses the size of touristic activity in the medina versus the logarithm of the population, we see a wide spread for similar population levels. This confirms that the medinas’ population is not a primary driver of touristic activity, which is influenced more by other factors (attractiveness, accessibility, history, etc).

Another view of the clustering of the medina's can be gained through geography (see Figure 8). Plotting the clusters on the map of Morocco, we see a clear tendency of the medina's closer to the coast to be more developed in their touristic activity, whereas medina's in the interior seem to share less of the activity, with an exception of Marrakech, Fez, Mekness, and Ouarzazate.

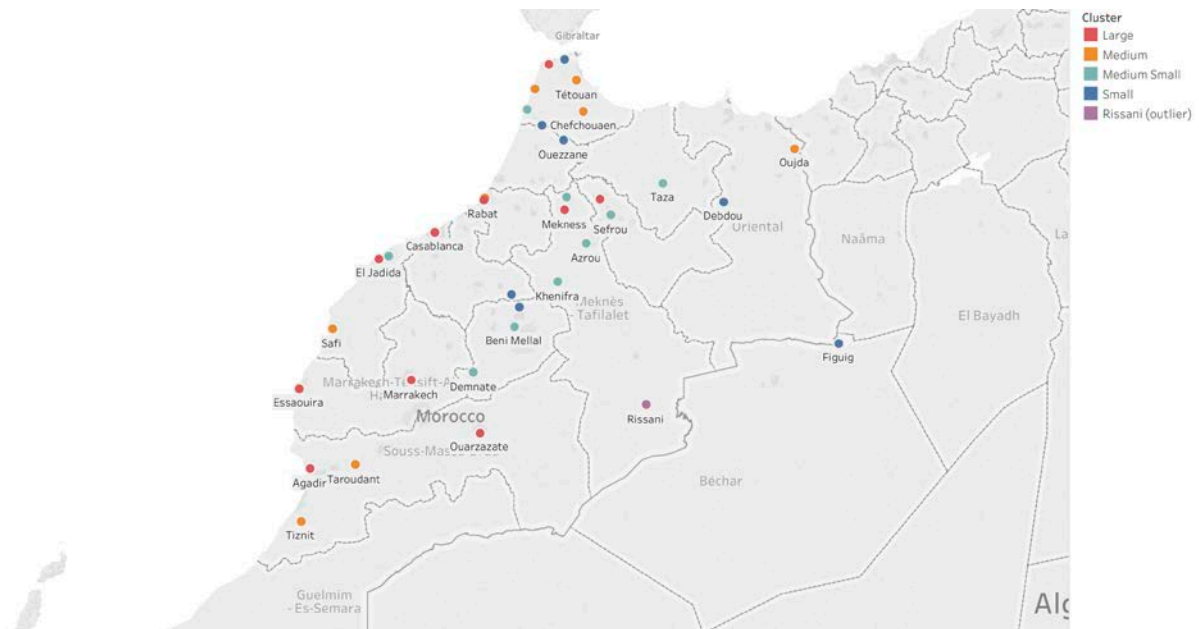


Figure 8: Geographical representation of the Medina's grouping based on the K-means Clustering approach.

5. DISCUSSION

It is important to notice that the perception of what makes a medina is not a static canvas but rather a diverse, dynamic, historical shaped, and multi-layered entity. Foucault (1984) uses the term 'heterotopia' to describe "spaces which have more layers of meaning or relationships to other places than immediately meet the eye". In this sense, a medina could be considered as a 'heterotopia'¹⁶. Houdek (2014), for example, concludes that "applying static top-down processes of place-making and global preservation campaign (under ambitious heritage programs) on communities of living memory, conflicting with the active and fluid memory places that require flux and mobility, and that these places are re-configured in space and time". Moreover, concerns persists that present artisan heritage, like metal-smithing community in Fez, will lose the original meaning, memories, and mnemonics of such practices and even carry on. For example, the last barrel-maker has recently left Fez. As stated by Houdek (2014) "Heritage can only be preserved so long as it is actively produced through an embodied, connective, rhetorical, and educative transmission process". Even globalization has an impact on small scale artisans in medina's like Azrou (Bellamine, 2007).

¹⁶ A heterotopia is a physical representation or approximation of a utopia, or a parallel space.

Moreover, contemporary Moroccan artistic production within the global world is not static but very diverse and fluid (Barnes, 2008).

Despite the global phenomena of urbanization, which is also visible in Morocco, in the medina's we witness an opposite trend. The last fifty years, there is a yearly increase in the population. Moreover, since the 1980's this has been statistically confirmed in the census information. This social change goes along with impoverishment of the population and deterioration with the housing stock (Godin and Le Bihan, 2012). Another related perspective of the urban regeneration and preservation process of the medina's are the tourism related property development initiatives from the Moroccan government, to increase influx of tourism-related foreign capital. This process has been identified by Lee (2008) as the 'Riad Fever' (or riad property boom), which tends "to serve foreign private interests, rather than the interests of local Medina residents".¹⁷ Godin and Le Bihan (2012) put this view in perspective and see this more as a marginal niche market which affects only the more speculative medina's. The impact is clearly visible in Marrakech and Fez, which has undergone an extensive social-spatial transformation, which is also related to several medina preservation, rehabilitation, and urban revitalization projects, which mainly serve to attract more tourists.

Ashworth and Page (2011) identified an interesting paradox: "the more unique the urban attraction is, the less likely is the visit to be repeated and will tend to be a once-in-a-life-time experience". They further conclude that a more generalized way of selling an ambiance or 'way of life' (Paris, Vienna, New York) is likely to generate more repeat visits than a specific attraction. It is thus important to take this into account by applying a place branding strategy. Medina's are not merely significant cornerstones of the (ancient) identity of cities, and in broader sense of a region or a country, but also enhance the attractiveness of places and the competitiveness between places. Large cities, with walled medina's, ranking in the Moroccan top-twelve tourist destinations are relatively well known under potential tourists. They have other place branding challenges than smaller, and especially more isolated, medina's.

Due to different influences, such as regionalization, decentralization, and globalization, many regions are increasingly responsible for their own economic development. Thus, the creation, identification, and valorization of specific regional assets and to highlight their own unique history and identity for differentiation becomes increasingly important. As stated by Donner *et al.* (2015) "The big challenge for Morocco is to close spatial disparities between strong demographic and socio-economic urban centers and underdeveloped rural, mainly agricultural and marginalized, areas". Moreover, they conclude that "Morocco offers opportunities for place branding, but until now it seems to be mainly

¹⁷ "During the French protectorate (1912-1956), the old medina's in Morocco remained unoccupied by the Europeans. The first houses which has been bought by foreigners started around the 1950's and 1960's. Since the late 1990s there has been a veritable boom in the demand for Moroccan houses. The revaluation of such districts also accompanied a rise in real estates" (e.g. Escher *et al.*, 2001).

limited by the uncompleted regionalization and decentralization process” and the difference between administrative and tourism regions (see Appendix 3). Their regional case study in the rural area of Chefchaouen has shown that there are some good preconditions for place branding, however still have a several challenges.

Another import issue is that the length of stay for urban tourism is in general much shorter than for other types of tourist destinations, such as beach, nature, or winter sport resorts. Van den Berg *et al.* (1995) stated that this is partly due to the variety of city environments, in contrast to non-urban places. A nice example is Casablanca, which can be considered as an important urban (world) hub. In the 2016th edition of the ‘MasterCard Global Destination Cities Index’¹⁸, they rank Casablanca the 9th most popular overnight destination for international visitors heading to the Middle East and Africa region. It has the highest number of tourist flights of Morocco, however, a large portion of visitors stay in the city only one overnight after they land at ‘Mohammed V’ International Airport. Even the old medina is hardly known under tourists. This underscores the importance and communication of diversity as a major asset to attract a large number of tourists.

Ashworth and Page (2011) stated that “urban tourism is especially vulnerable to shifts in fashion and in consumer tastes and life-styles”. They conclude that it might be a disadvantage if a city is listed as a UNESCO heritage site, to react in terms of place branding to the capriciousness nature of contemporary life-styles of tourist. Furthermore, they highlight that “cultural and heritage tourism attractions often assume that these are in essence timeless, universal, and imbued with immutable values which assures the city of a permanent enduring tourist allure”, which if not be appropriately managed can cause a downfall in popularity.

Urban tourism is an essential function of contemporary cities. A medina is much more than merely a static physical structure or canvas of a place. It is also engaged with the perpetuation of social and cultural life. Thereby, it is continuously influenced by many internal and external forces. To start to fully understand the potential of walled medina’s for tourism, this study has demonstrated that we must approach this subject from a broader perspective. As medina’s are in general part of much larger urban agglomerations, we argue that urban tourism is one of the key research domains to start with. Most (world) cities are in constant change and are influenced by a diversity of (local, regional, national, and international) interrelated developments and trends, with an impact on different aspects (technological, economic, and social), and are linked within different hierarchical structures. Important underlying trends are globalization and urbanization. As tourism can be seen as a geographical and social phenomenon, understanding tourism in cities should include the wide spectrum of urban studies, urban and tourism geography, and social science. Knowledge and new

¹⁸ <https://www.moroccoworldnews.com/2016/11/201968/mastercard-casablanca-ninth-tourist-destination-middle-east-africa/>

insights from such studies should be integrated in place branding methodologies. Despite the fact, that some of these (interlinked) research areas are still in their infancies, as has been demonstrated in this paper, there exists a rich body of literature which could provide valuable insights to help governments to adjust their policies to reach their tourism ambitions. Based on our extensive literature research, we propose a research agenda which at least include the following key topics:

- What are the spatial patterns (spatial distribution and space usage) of tourists in medina's and how is this related to the morphological layout of a city and the historical shaped developments of the urban tourism infrastructure?
- How to pursuit sustainable equilibrium between urban tourism and a livable city, by contributing to urban quality and the well-being of local communities, and to avoid tensions, conflicts, and anti-tourism movements due to cultural commodification and tourism-induced gentrification?
- How smart cities objectives can be linked to urban tourism policies from a place branding perspective with a special emphasize on the integration and use of information, communication, infrastructure, and services?
- What is the impact of globalization on urban tourism and on which scale this phenomenon is visible in the urban transformation of a medina?
- How we can find a good balance between the (global) urbanization trend and reverse process of de-population in the medina's?
- How the clustering of medina's, for example, based on information from tourism accommodation websites, can help to support national and regional tourism policies?

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Appendix 1: Scores of the cultural heritage sites based on the Medina Tourism Potential index', based on Bigio (2012)

Walled medina's and cultural heritage sites	UNESCO heritage site	Important heritage assets	Proximity to the sea, or touristic sites (park)	Adjacent tourism areas	Accessibility Air, Train, Highway	Hotels and guest houses	Cultural Crafts business	Cultural festivals, moussems	Overall Scores	Overnight hotel stays 2015	Census 1994	Census 2004	Census 2014	New regions Morocco 2015
Fez	1981								7	723,222	796,180	977,946	1,150,131	Fez-Meknes
Mekness	1996								7	209,538	608,441	713,609	520,428	Fez-Meknes
Taza	(1995)								5	N.A	120,971	139,686	148,456	Fez-Meknes
Moulay Idriss (*4)	(1995)								5	N.A	12,521	12,611	11,615	Fez-Meknes
Sefrou (*1)									4	N.A	54,163	64,006	79,887	Fez-Meknes
Marrakech (*2)	1985								8	6,257,949	676,800	843,575	928,850	Marrakech-Safi
Essaouira	2001								8	417,601	56,074	69,493	77,966	Marrakech-Safi
Safi									4	N.A	262,276	284,750	308,508	Marrakech-Safi
Tanger	1997								6	904,377	138,534	173,477	243,082	Tanger-Tétouan-Al Hoceima
Tétouan									8	328,366	277,516	320,539	380,787	Tanger-Tétouan-Al Hoceima
Chefchouaen (*3)	(1995)								4	N.A	31,410	35,709	42,786	Tanger-Tétouan-Al Hoceima
Larache (Lixus)									7	N.A	90,400	107,371	125,008	Tanger-Tétouan-Al Hoceima
Ouezzane									2	N.A	52,168	57,972	59,606	Tanger-Tétouan-Al Hoceima
Ksar es-Seghir									3	N.A	8,818	10,995	12,997	Tanger-Tétouan-Al Hoceima
Asilah									4	N.A	24,588	28,217	31,147	Tanger-Tétouan-Al Hoceima
Ksar El Kebir									1	N.A	107,065	107,380	126,617	Tanger-Tétouan-Al Hoceima
Rabat	2012								7	619,642	623,457	627,932	577,827	Rabat-Salé-Kenitra
Salé									6	N.A	586,419	769,500	890,403	Rabat-Salé-Kenitra
Casablanca	(2013)								6	1,825,152	2,717,125	2,949,805	3,359,818	Grand Casablanca-Settat
El Jadida	2004								7	387,802	119,083	144,440	194,160	Grand Casablanca-Settat
Azemmour									4	N.A	32,739	36,722	40,920	Grand Casablanca-Settat
Agadir (*6)									4	4,691,093	254,865	346,106	421,884	Souss-Massa
Taroudant									4	N.A	57,136	69,489	80,046	Souss-Massa
Tiznit									4	N.A	43,001	53,682	82,858	Souss-Massa
Ouarzazate (*5)									2	311,439	39,203	56,616	71,067	Daraa-Tafilalet
Rissani (*7)									1	N.A	4,673	5,575	5,010	Daraa-Tafilalet
Oujda	(2011)								5	414,755	357,278	400,738	494,252	Oriental
Figuig									2	N.A	14,245	12,577	10,872	Oriental
Debdou									0	N.A	4,477	4,540	4,960	Oriental
Boujad (Beejad)									1	N.A	33,321	40,513	46,893	Beni Mellal-Khenifra
Demnate									2	N.A	17,782	23,459	29,504	Beni Mellal-Khenifra
Azrou									3	N.A	40,808	47,540	54,350	Beni Mellal-Khenifra
Beni Mellal									2	N.A	140,212	163,286	192,362	Beni Mellal-Khenifra
Khenifra									3	N.A	60,835	72,672	117,510	Beni Mellal-Khenifra
Ksbah Tadla									0	N.A	36,570	40,898	47,343	Beni Mellal-Khenifra

Note 1: This table is partly based on Bigio (2012);

Note 2: The years between "()" in the column 'UNESCO heritage site' are on the tentative list of the world heritage list.

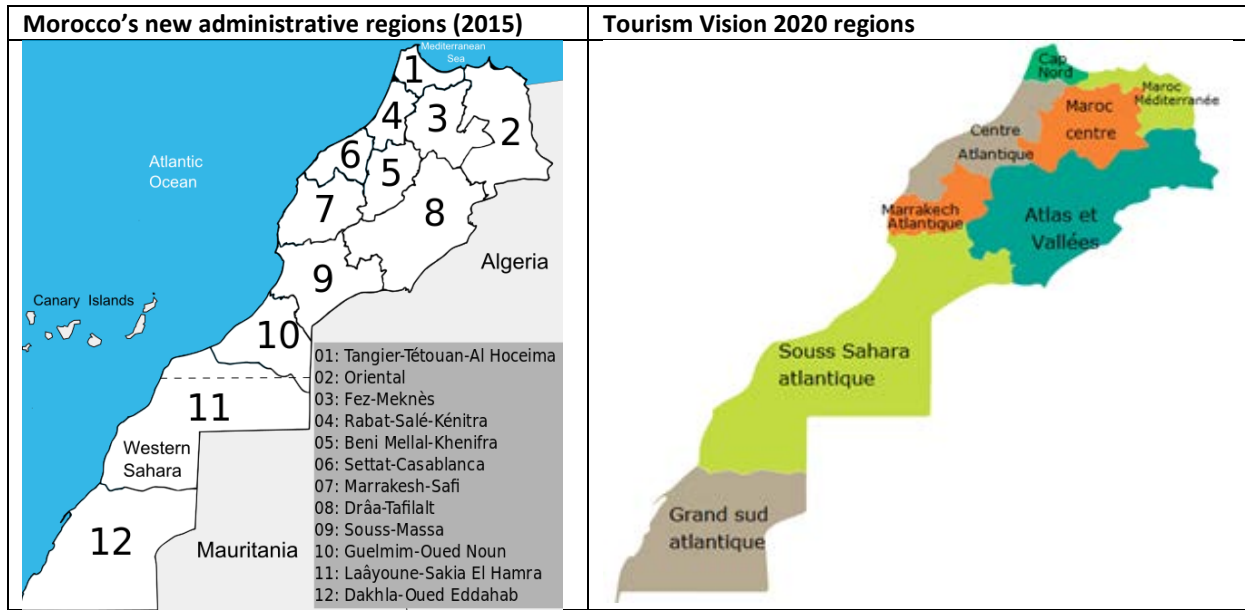
*1: The Cherry Festival of Sefrou has been added to the world heritage list in 2012; *2: The '*Jemaa el Fna*' square in Marrakech has been added to the world heritage list in 2008; *3: The 'Mediterranean Diet' has been added to the world heritage list in 2013; *4: The archaeological site 'Volubilis', next to Fez, has been added to the world heritage list in 1997; *5: The Ksar of 'ait ben haddou' has been added to the world heritage list in 1987; *6: The medina of Agadir was totally destroyed during earthquake on 29th February 1960, only 3 buildings were remained; *7: Close to Rissani are the remains of the once great walled oasis city of Sijilmassa (Lightfoot and Miller, 1996).

Appendix 2: Data collection from accommodation websites: Tripadvisor, Booking, and AirBNB.

Walled medina's and cultural heritage sites	Trip advisor					Booking				Airbnb		Trip advisor reviews per Censes 2014	New regions Morocco 2015
	Hotels	Vacation rentals	Things to do	Restaurants	Reviews	Properties	Reason to visit 1	Reason to visit 2	Reason to visit 3	Number of locations	Average prices		
Fez	96	79	278	186	67,289	267	Old town	Culture	History	799	51	0.06	Fez-Meknes
Mekness	85	35	263	141	32,126	45	History	Old town	Culture	160	52	0.06	Fez-Meknes
Taza	13	3	2	3	120	-	-	-	-	11	88	0.00	Fez-Meknes
Moulay Idriss	12	1	2	6	403	5	Ruins	Scenery	Tranquillity	161	51	0.03	Fez-Meknes
Sefrou	10	3	1	-	85	12	-	-	-	21	55	0.00	Fez-Meknes
Marrakech	505	1,083	1,063	765	528,170	1,260	El Fna	Mountains	Square	4,896	101	0.57	Marrakech-Safi
Essaouira	78	262	138	253	68,271	177	Beaches	Relaxation	Harbours	1,057	67	0.88	Marrakech-Safi
Safi	16	9	8	14	1,090	26	Beaches	Friendly	Relaxation	41	48	0.00	Marrakech-Safi
Tanger	100	238	108	311	39,585	96	Beaches	Culture	Friendly	392	73	0.16	Tanger-Tétouan-Al Hoceima
Tétouan	17	43	8	32	2,939	21	Old city	Friendly	Scenery	255	62	0.01	Tanger-Tétouan-Al Hoceima
Chefchouaen	23	12	13	38	10,883	66	Mosque	Shopping	Square	220	55	0.25	Tanger-Tétouan-Al Hoceima
Larache (Lixus)	7	5	1	5	240	2	Beaches	Friendly	-	254	66	0.00	Tanger-Tétouan-Al Hoceima
Ouezzane	1	-	-	-	11	-	-	-	-	5	19	0.00	Tanger-Tétouan-Al Hoceima
Ksar es-Seghir	2	2	-	-	21	-	-	-	-	4	54	0.00	Tanger-Tétouan-Al Hoceima
Asilah	39	56	4	31	3,145	38	Beaches	Tranquilly	Relaxation	208	71	0.10	Tanger-Tétouan-Al Hoceima
Ksar El Kebir	-	-	-	-	-	-	-	-	-	26	42	-	Tanger-Tétouan-Al Hoceima
Rabat	40	42	50	241	23,924	78	Hassan	Palace	-	653	61	0.04	Rabat-Salé-Kenitra
Salé	16	12	12	10	1,025	88	Old town	Culture	Food	610	56	0.00	Rabat-Salé-Kenitra
Casablanca	80	154	215	780	48,832	134	Mosque	Food	-	1,667	63	0.01	Grand Casablanca-Settat
El Jadida	12	36	42	156	5,544	34	-	-	-	273	63	0.03	Grand Casablanca-Settat
Azemmour	6	3	5	5	201	4	-	-	-	25	98	0.00	Grand Casablanca-Settat
Agadir	78	278	154	234	70,409	122	Paradise	Souks	Biking	1,400	56	0.17	Souss-Massa
Taroudant	17	27	11	18	5,148	31	Souks	Friendly	Old town	118	65	0.06	Souss-Massa
Tiznit	26	19	2	8	563	21	Tranquillity	Markets	Beaches	187	57	0.01	Souss-Massa
Ouarzazate	39	10	101	55	15,588	36	Film studio	Ben Haddou	Draa valley	186	43	0.22	Daraa-Tafilalet
Rissani	12	1	22	8	734	3	Deserts	Nature	Relaxation	175	34	0.15	Daraa-Tafilalet
Oujda	17	10	4	21	481	10	Tranquillity	Souks	City walks	35	41	0.00	Oriental
Figuig	-	4	-	-	44	0	-	-	-	3	48	0.00	Oriental
Debdou	-	1	-	-	-	0	-	-	-	5	45	-	Oriental
Boujad (Beejad)	-	-	-	-	-	0	-	-	-	6	48	-	Beni Mellal-Khenifra
Demnate	8	1	1	-	295	2	-	-	-	7	34	0.01	Beni Mellal-Khenifra
Azrou	4	2	5	3	666	17	Nature	Tranquillity	Clean air	41	49	0.01	Beni Mellal-Khenifra
Beni Mellal	14	4	2	9	246	6	Nature	Mountains	Scenery	38	85	0.00	Beni Mellal-Khenifra
Khenifra	4	1	1	-	39	12	-	-	-	7	41	0.00	Beni Mellal-Khenifra
Ksbah Tadla	-	-	-	-	-	0	-	-	-	2	41	-	Beni Mellal-Khenifra

Note: Data accessed from www.Airbnb.com (Air BNB) www.Booking.com (Booking) and www.TripAdvisor.com (TA) on 17 September 2016.

Appendix 3: Difference in new administrative regions and tourism territories



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