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Tourist Attraction Development in Denmark and It's Impact on Regions

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Abstract
The research aim of this paper is two-fold: firstly, to discuss and highlight the development of cultural and tourist attractions both at national and regional level; secondly to show that tourist attractions play important roles both in destination marketing and the economic contribution to the Danish regions. The paper presents an investigation on the definitions of different concepts within the cultural, tourism and creative industries, and experienced economy. The statistical approach is used in this analysis, both relating to the data presentation and the application of the Danish regional model for the economic assessment of tourist attraction. The paper describes the trends of cultural and tourist attractions in Denmark both in the economic terms and in terms of numbers of visitors at attractions. Tourist attractions have an influence on tourists' choice of their destination. The last part of the paper focuses on the case studies within which the economic impacts of tourist attraction on the regions are presented. The Danish inter-regional model is applied for analyzing the economic and employment effects of these tourist attractions. The conclusion is drawn in the last section.

Key words: tourism attractions, cultural tourism, national accounts for culture industry, economic impact.

Introduction

Tourism, creativity- and culture-contained activities, and the so-called 'experience Economy' created by all these activities are observed by its growing importance in our society. The trends of these activities influence both production and consumption. From the supply-side, producers tries to add the new designs and culture featured innovation into the physical products and as well as into the services; on the other hand, the demand for the innovative new products and 'experience' based tangible products and intangible services continues to increase. Tourist attraction is one of good examples to follow the development in these trends. Theme parks are often connected with innovative products and services that give visitors unique experiences. A rise of theme parks and other tourist attractions reflects a huge potential demand that more people are interested in participating into such leisure activities than, for example 20 years ago. Other cultural or tourist attractions refer here are, for example, museums, botanical gardens and zoological parks.

This paper mainly focuses on development of tourist attractions and impact of tourist attractions on the regional economies. From a statistical and methodological point of view, it is necessary to give a clear definition for tourist attractions – to see which concrete branches or products are included in the analysis. Three kinds of tourist attractions, i.e. amusement parks, museums, and botanical gardens and zoos are given a special analysis in the paper. However, as tourist attractions are closely related to tourism industries, such as hotels and restaurants, relevant data for the tourism branches and other cultural branches are also shown for the comparison purpose.

Development in tourist attractions is shown both in the economic terms (output and employment from the supply side) and in terms of numbers of visitors at attractions. Tourist attractions have an influence on tourists' choice of their destination. Tourist attractions surely play an important role in tourism marketing and the destination branding. Tourist attractions play also a role in generating the income and employment to the local economies.

As a point of departure we present in the second section the definitions and methods for the analysis. Starting with a discussion on cultural activities, culture industries and culture economy, it attempts to compare culture activities with tourism and experience-oriented activities. It is important to give a comparison between these terms, as these terms are the basis for making the statistical data and understanding the differences in the statistical data. The third section presents the development in culture activities by the statistical data, showing the trends in a 12-years period which is compared with the conventional tourism branches, such as hotels and restaurants. The regional data are also presented here, trying to give an answer for the question regarding urban and rural phenomenon of culture activities and tourist attractions. In the fourth section presents the development in tourist attractions by number of visitors. It is shown that tourist attractions like amusement parks are more fluctuated than the museums and other cultural institutions. This section discusses also the role of tourist attractions in destination marketing and promotion. The fifth section presents the economic impact of tourist attractions on the regional economies by using case studies. The final section is suggestions and conclusion.

Definitions and the literature review

When the culture activities are mentioned, most people will immediately associate them with museums, theaters, movies, television, books, music, computer games and possibly also sports. However, when it concerns with the economic contribution of culture industries, the definition for culture industries has to be clear, just like it concerns with the tourism contribution to the economy it is necessary to make the tourism satellite accounts (UNWTO, 2008).

In the book "The Business of Culture" (Lampel, et al. 2006) the authors claim that "defining cultural industries must begin with the recognition that the term brings together two domains: culture and industry. Culture is the product of ongoing symbolic human activity that is as old and as pervasive as human society itself. Culture is intrinsic to what makes us human. It is manifested in activities as simple as a mother's lullaby or as complex as a Kabuki play. Industry, by contrast, is a system of production, distribution, and marketing that delivers products to consumer. The system is created by specialist organization and sustained by consumer demand. Bringing culture and industry together therefore gives a rise to culture industries: systems of production, distribution, and marketing that deliver symbolic products to consumer, where each culture industry is made up of firms that specialize in the production, distribution, and marketing of specific cultural products, and is sustained by consumer demand for these products" (Lampel, J., J. Shamsie and T. K, Lant, 2006, p6). The above definitions stress both the supply-side and demand-side of culture activities. The production, distribution and marketing of cultural products are vital for the supply side of the activities; however, without consumer demand for these products, the culture economy can hardly exist. Richards noticed a rapid increase in both production and consumption of heritage attractions and identified that it was "a significant supply-induced element of demand" (Richards, 1996).

Unlike the traditional industries, cultural products are not consumed as traditional products that are being used to solve some practical problem. For Hirsch (1972) the definition of culture industries began with defining of cultural products as "non-material goods directed at a public of consumers, for whom they generally serve an aesthetic or expressive, rather than clearly utilitarian function" (Hirsch (1972), p, 642). The emphasis on cultural products as defining culture industries was shared by Lawrence and Philips (2002, p,43), who also saw cultural goods as "products that are consumed in an act of interpretation rather than being used," but they opened the definition further by arguing that cultural products are "goods and services that are valued for their 'meaning'." Power (2002) saw cultural products as a good point of departure that he expanded Hirsch's (1972) definition even further. Power argued that culture industries consist of 'economic actors' involved in the production of goods and services whose value is primarily or largely determined by virtue of their aesthetic, semiotic, sensory, or experiential content" (Power, 2002, p, 106).

The most likely way to produce a coherent definition of the culture industries is to see the boundaries between such symbolic, cultural production and other "non-cultural" kinds of production as porous, provisional and relative, and to think about these boundaries in terms of the relationship between the utilitarian functions and non-utilitarian (artistic/aesthetic/entertainment) functions of symbolic goods (see Hirsch 1972; Hesmondhalgh, 2002, 2005; Power & Scott 2004). These definitions can partly divide those industries that produce the pure non-material goods, like museum and theater, from those that produce only the material goods, such as agriculture. Many industries could also produce goods that contain both material and non-material factors, such as cars, furniture and clothes. Cars and furniture are material products, but they also have the aesthetic, semiotic, sensory, or experiential characteristics in their contents. Clothes, especially the fashion clothes have definitely the aesthetic, semiotic and sensory contents in them. These definitional problems in the cultural and creative industries have caused the statistical "lag" in relation to the other industries. Taking examples from the recommendation for tourism satellite accounts (UNWTO, 2008), the recommendation acknowledges that "tourism is a social, cultural and economic phenomenon which entails the movement of people". The recommendation provides a concrete list for tourism products. Tourism products are categorized by tourism characteristic products (hotels, restaurants, transport, travel agencies, cultural services and tourism attraction like amusement parks), and other consumption products (i.e. tourism connected products such as tourists' shopping on clothes, watches, etc). For making accounts for cultural and creative industries, a concrete list for the culture and creative products is needed.

Table 1 List of products within the national accounts system relating with tourism, tourist attraction and cultural activities

Tourism	Tourist attractions	Other cultural activities
Hotels and similar, Restaurants and similar, Passenger transport (passenger train, taxi, ferry and air transport), Tourist agency and travelling services, car renting	amusement parks, museum, theatre and concerts, botanical garden and zoo, commercial sports activities	film/video and cinema, radio and TV, press bureau, library and archive, sport clubs, lottery and games

Table 1 gives a comparison between the definitions for tourism, tourist attractions and cultural activities. There are 11 aggregated cultural products in the culture industry within the Danish national accounts. There are 30 tourism characteristic products including the four tourist attraction products. Table 1 provides a list of products that are categorized into three types: (1) tourism - the products are defined as tourism characteristic products. These products are mostly demanded by tourists. According to UNWTO's definition, tourists are those who travel away from their usual environment for leisure, business or other personal purposes. (2) Tourist attractions – the products are mostly related with the terms of tourist attractions and event tourism. All these products are parts of cultural products within the culture industry. The consumers of tourist attractions can be both tourists and local residents. (3) Other cultural products – the products are culture featured and demanded mostly by local residents.

Statistically tourist attraction has both tourism and culture features, as it is both a part of tourism statistical accounts and a part of culture statistical accounts. The tourists who are attracted by the tourist attractions and conducted mostly culture-oriented activities at the destinations are often called 'culture tourists'. 'Culture tourism' is distinguished by its nature with 'nature oriented tourism' and 'mass tourism'.

Tourist attractions have always been the focus in the tourism studies. Tourism attraction is often related with tourist motivation analysis, such as 'push' and 'pull' factor analysis (see Crompton, 1979; Dann, 1977; Pearce, 1993; Uysal and Hagan, 1993; Uysal and Jurowski, 1994). Tourist attraction studies are also related with destination marketing and leisure experiences (Leiper, 1990; Kozak, 2002; Richards, 2002). The cultural attractions have been grouped as four main types by Kim, Cheng, O'Leary (2007), and they showed that participation patterns for diverse cultural attractions were determined by socioeconomic/demographic characteristics as well as the number/distance of trips. The book "managing visitor attraction" by Fyall, et al. (2008) provides a cutting-edge insight into the issues, including the role, nature, development of visitor attractions, as well as the management, marketing and case studies on visitor attractions.

The rapidly developing relationship between the tourism and creativity, the tourism studies begin to focus on the so-called "creative turn" in tourism development. "The emergence of 'creative tourism' reflects the growing integration between tourism and different place-making strategies, including promotion of the creative industries, creative cities and the 'creative class'" (Richards, 2011). The relationship between the tourist attractions and creativity is also worthwhile for the further study.

Most studies on tourist attraction are qualitative studies, even if some of them applied factor analysis. There is a rise trends in the tourism studies that apply econometric methods in analyzing the surveyed data. Very a few tourism studies adopted the national accounts system to explore the true values of tourism production and employment. It needs to investigate the role that tourist attractions play in the regions of tourist destinations, both by the destination marketing (which has received attentions in research) and by the economic contribution. This paper is attempt to fill the gap in mapping the development of the tourist attractions by the statistical data from the national account system and describing the economic contribution of tourist attractions in the destination regions.

Trends in culture and tourist attractions

The methodology adopted in accounting for culture industries is similar as the tourism satellite accounts (TSA). The general document for TSA can be found in UNWTO (2008) and the method for creating the Danish regional TSA is documented by Zhang (2005, 2008) and Zhang and Hedetoft (2011). This investigation on cultural branches and products goes in depth into the each single cultural product in the national accounts. There are 11 detailed culture branches and much more cultural products within the culture industry in the national account system. The cultural products can be aggregated into 11 according to the same branches they belong to. Nevertheless, there is no information of regional culture production at such a detailed level.

In order to construct regional accounts for culture industries, we need to have at least two sets of data. One set of data is 'national supply and use tables' with the information by product. The national accounts provide such tables at the national level, for example, that tells which branch produces which products. Another set of data is 'regional production accounts' with detailed industries' information where it provides production values and employment by each region. For example, from the first set of data man can get total production value by each product, such as amusement parks, museums, zoos and sports in the culture industry. From the second set of data man can get the production value of the culture industry by each region (in the Danish case, region is at 98 municipality level).

These two sets of data can be merged in the way that creates regional satellite accounts for culture industry. The production, gross value added and employment in the culture industry are available at municipality level with 11 culture branches and products through the regional satellite accounts for culture industry. The benefits from the regional satellite accounts are: 1) to estimate the size of a specific sector's economy, including its production value, GDP and employment. These specific sectors, such as tourism, culture industry, creative industry and information, communication and technology (ICT) and environment, often do not exist in the national accounts; 2) to compare the development and the contribution between the different economic sectors; 3) to keep consistency with the national accounts. The principle for making a satellite account is to keep this special account consistent with the national accounts. In the other word, the satellite accounts function as supplementary accounts to national accounts without ruining the total consistency.

The data presented in this section are obtained from the regional satellite account for the culture industry. The estimated gross output, gross value-added and employment can be compared with the other economic sectors. It is also allow for a regional comparison.

Table 2 shows the gross output in five types of tourist attractions (theatre /concerts, amusement parks, museums, botanic garden and zoos, and commercial sports) in the culture industry compared with hotels and restaurants that are typical tourism industry. It is shown that gross output in hotels and restaurants branches is 56 billion DKK in 2008, which accounts for about 1.75% of the national total gross output in Denmark. The gross output in the five culture branches is estimated to 24.2 billion DKK in 2008, which accounts for only 0.75% of the national total production. The gross output in the purely tourist attractions (such as amusement parks, museums, botanic garden and zoos) is so small that totally accounted as 0.28% of the national output.

Table 2 Gross output in tourist attractions compared with hotels/restaurants and other cultural branches in Denmark, 1996-2008 (In current prices, million DKK)

	1996	**2000**	**2004**	**2006**	**2008**	**Share***
Hotels	7,080	9,784	9,955	12,661	14,248	0.44
Restaurants	23,358	28,634	30,407	35,327	41,766	1.30
Hotels and restaurants	30,438	38,418	40,362	47,988	56,013	1.75
Theatres and concerts	4,173	4,832	5,673	6,883	8,019	0.25
Amusement parks	986	1,560	1,775	2,197	2,427	0.08
Museums	2,958	3,246	4,025	4,885	5,320	0.17
Botanic gardens and zoos	476	584	737	896	948	0.03
Commercial sport	4,626	4,840	6,007	6,300	7,451	0.23
The 5 cultural branches	13,219	15,061	18,218	21,161	24,164	0.75

Sources: Statistics Denmark and own calculation.

Note: *Share is percentage (%) of production in the branch in the total production value in 2008.

Table 3 shows change rates of gross output in the different types of tourist attraction compared with hotels and restaurants. The average growth rate during 1997-2008 for hotels and restaurants is 2.4%, while the average growth rate for the five tourist attractions is 2.9%. The amusement parks have experienced the highest growth (5.9%) during the same period. The botanical garden and zoos have yearly growth rate at 4%.

Table 3 Change rates of gross output in hotels/restaurants, cultural and tourism attraction branches in Denmark, 1996-2008 (%)

	Average yearly growth rates* (%)			
	1997-2000	**2001-2004**	**2005-2008**	**1997-2008**
Hotels	4.5	-3.3	5.9	2.7
Restaurants	2.8	-1.4	5.1	2.3
Hotels and restaurants	3.2	-1.8	5.3	2.4
Theatres and concerts	1.0	1.7	7.4	3.4
Amusement parks	9.4	-1.6	6.7	5.9
Museums	-0.4	3.9	5.7	2.8
Botanic gardens and zoos	2.6	3.3	5.5	4.0
Commercial sport	-1.4	3.3	3.8	1.9
The 5 cultural branches	0.6	2.4	5.7	2.9

Note: * Average yearly growth rates are calculated on the yearly basis in the fixed prices.

Figure 1 shows growth rates in gross output by fixed price in the tourism attraction branch compared with hotels-restaurants and other culture branches. The figure shows clearly that the branch like amusement parks is more fluctuated than the other branches, like hotels and restaurants, and theaters and museums.

Table 4 shows the growth in employment in the same branches as in Table 2. Due to labor intensive feature of tourism branches like hotels and restaurant, the shares calculated by the employment (3.44%) for hotels and restaurants are higher than calculated by production values (1.75%). The five tourist attractions accounted as nearly the same (0.82% vs 0.75%) as calculated by the production values. The change rates calculated by the employment give the same trends as the production values.

The trends and development in the tourist attractions showed that demand elasticity in these branches is rather high. In the economic boom years, amusement parks gained the

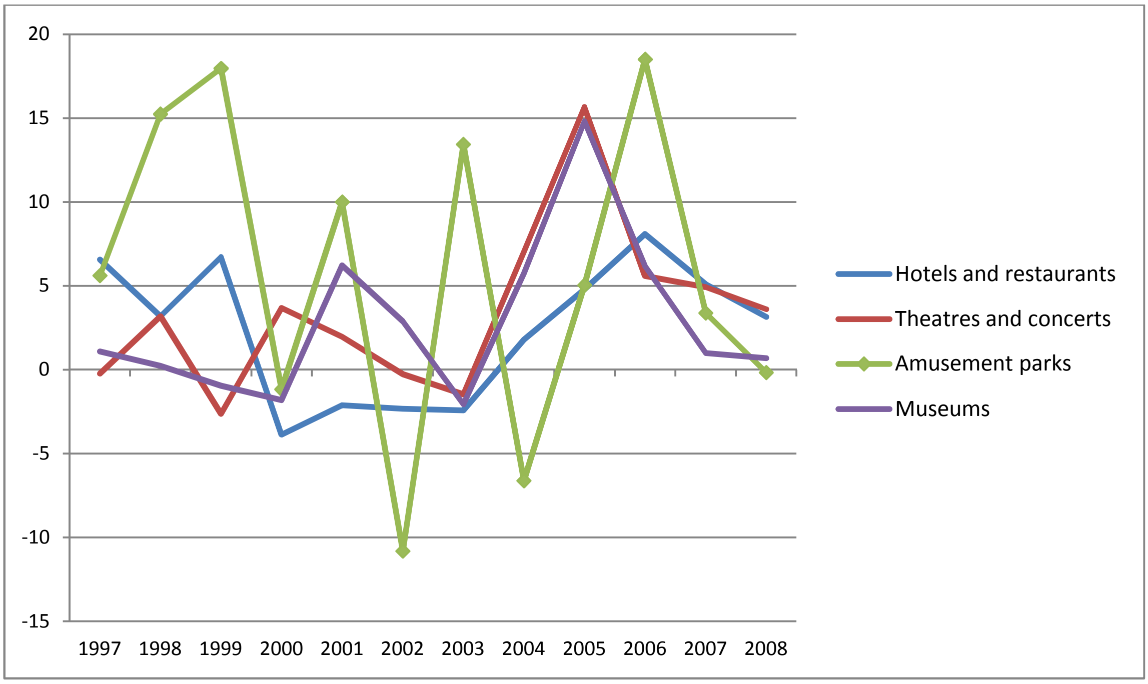

Figure 1 growth rate of gross output by fixed prices in tourism attractions compared with hotels and restaurants

Table 4 Employment in the cultural and creative industries in Denmark, 1996-2008

(By full-time equivalent employment)

	1996	**2000**	**2004**	**2006**	**2008**	**Share***
Hotels	19,892	20,980	21,186	22,482	23,344	0.80
Restaurants	55,881	61,462	65,601	70,549	76,517	2.64
Hotels and restaurants	75,773	82,442	86,787	93,031	99,861	3.44
Theatres and concerts	6,099	6,692	7,050	7,885	7,961	0.27
Amusement parks	1,339	2,123	2,184	2,527	2,373	0.08
Museums	4,098	4,400	4,862	5,402	5,230	0.18
Botanic gardens and zoo	683	738	836	932	895	0.03
Commercial sport	6,442	6,561	7,208	6,860	7,216	0.25
The 5 cultural branches	18,661	20,514	22,139	23,605	23,676	0.82

Sources: Statistics Denmark and own calculation.

Note: *Share is percentage (%) of GVA in the branch in the total GVA value in 2008.

highest growth rates, while in the economic depression years, the growth rates fell also much down than the other branches. For example, amusement parks experienced growth rates of 18% in 1999 and 2006 and 13.4% in 2003, while the growth rates in hotels and restaurants reached 6-8% for the same years. The growth rates in amusement parks were -10.8% and -6.6% in 2002 and 2004 – also the highest fall compared with the other branches. The development trends in theater and concerts and museums are more fluctuated than hotels and restaurants.

Development in tourism attractions in Denmark

According to Wikipedia, a tourist attraction is a place of interest where tourists visit, typically for its inherent or exhibited cultural value, historical significance, natural or built beauty, or amusement opportunities. Example of tourist attractions are including monuments, zoos, aquaria, museums and art galleries, botanical gardens, theme parks and amusement parks. Certain historical buildings (castles, old universities, libraries, former prisons) and modern skyscrapers and modern designed buildings are also tourist attractions. In case of cultural events (musical festival and sport events), they function as periodical tourist attractions. Therefore there are at least four types of tourist attractions: 1) free and open attractions, like natural beauty of landscape, old buildings and modern skyscrapers, and monuments; 2) knowledge / aesthetic seeking attractions where they charge entrance fees, such as art galleries and museums; 3) commercial amusement purposed attractions, such as amusement parks and zoos where they also charge entrance fees; 4) cultural events such as musical festival and sport events. In certain cases, hotels and restaurants are also tourist attractions when tourists choose to stay and eat in these hotels and restaurants for the unique experiences.

Growth in tourist attractions

Creativity and innovation is much more involved in the tourist attraction development nowadays than ever before. New products and services based on innovation do give visitors unique experience; therefore more and more visitors can be attracted to the regions. It is observed that many regions have put their focuses and investment on the development of tourist attractions.

It is not possible to register visitor numbers at free /open attractions, due to the entrance is free, such as beaches, forests, monuments, etc. The tourist attractions are included in this analysis are mostly museums, amusement parks and zoos. These tourist attractions have both registered the numbers of visitors and entered into the statistical system with their economical accounts and employment numbers. Table 5 shows visitor numbers in the main tourist attractions in Denmark. The top 16 tourist attractions are grouped into three types: 5 are museums, 7 are amusement parks, 3 are zoos and one is observatory. 5 of them are located in the centre of Copenhagen, three of them are at the Great Copenhagen Area (northern part of Copenhagen), two of them are located in the second largest city in Denmark (Aarhus) and two of them are located in the third and fourth largest cities (Aalborg and Odense). Only four of them are placed at rural areas where the tourist attractions might be the only motives for tourists visiting the regions.

Table 5 Visitor numbers in the main tourist attractions in Denmark (In thousands)

Top places	Names of attractions	Municipality	2002	2004	2006	2008	2009
1	Tivoli¤	Copenhagen	3,764	4,316	4,396	3,973	3,868
2	Dyrehavsbakken¤	Lyngby	2,500	2,500	2,600	2,600	2,500
3	Legoland¤	Billund	1,580	1,530	1,500	1,600	1,600
4	Zoologisk have, København#	Frederiksberg	1,131	1,233	1,148	1,394	1,298
5	Farup sommerland¤	Jammerbugt	444	552	557	579	586
6	Djurs sommerland¤	Syddjurs	477	481	495	528	550
7	Louisiana*	Fredensborg	588	502	351	559	475
8	BonBon-Land¤	Næstved	517	537	503	441	440
9	Odense Zoo#	Odense	391	417	378	430	402
10	Aalborg Zoologiske Have#	Aalborg	364	386	389	372	398
11	Nationalmuseet*	Copenhagen	354	377	463	373	397
12	Statens Museum for Kunst*	Copenhagen	250	315	413	313	393
13	Rundetårn§	Copenhagen	309	379	335	372	377
14	Den Gamle By*	Århus	323	360	362	333	362
15	Tivoli Friheden¤	Århus	307	235	281	326	361
16	Frilandsmuseet*	Lyngby	105	150	225	288	358
	SUM		13,402	14,270	14,396	14,480	14,365

Sources: For year in 2008 and 2009: Visit Denmark "Attraktionslisten 2008 /2009".
Data in previous years from Denmark Statistics home homepage.
Notes: types of attractions are indicated by * museums, ¤ amusement parks, # zoos, § observatory.

The trend of visitor numbers by the three types of tourist attraction is shown in the figure 3. It is seen that the museums have experienced the highest yearly growth rate by 11.4%, while the amusement parks and zoos have 5.6% and 7.6% respectively. The amusement parks had experienced a growth from 2002-2006, afterwards they are stagnant and slightly going down. The total number of visitors in this type of tourist attractions is around 10 million and it accounts for nearly 70% of total (16) attractions. The number of visitors in the six museums is 2.3 million, accounting for 15-16% of the total. From the figure it shows consistently a growing trend except a few years. The last group contains 3 zoos, which has nearly the same number of visitors as the six museums (around 2.2 million visitors) every year. The trend shows growing tendency most of years, but slowing down after 2008.

The role of tourist attractions

Tourist attractions play an important role in destination marketing, as tourist attractions are often the motives for tourists visiting the destinations. VisitDenmark has conducted a survey concerning international known tourist attractions in Denmark. The survey was carried out in the northern part of Germany, Norway, Sweden and the UK with 4000 interviews (VisitDenmark, 2011). The list of attractions in the survey covers museums, amusement parks, experience centers, sights and geographical place, like cities and island. The conclusion from the survey is that Copenhagen both as a name and the city is the most known attraction for international tourists; it is followed by the flagships attractions of Legoland and Tivoli. These three attractions are well-known by the four surveyed markets by people who have or have not visited Denmark. There are a series of attractions within the Great Copenhagen Area that tourists have knowledge of and have great interests in visiting them, such as H. C. Andersen's House, Opera House, Viking Museum, Little Mermaid, Amalienborg Palace, and lot of other museums in the region.

The survey identifies that attractions have certain influence on their choice of destinations. For example, with the question "you find the attractions you like to visit, then afterward you choose the region to stay", 37% of the British, 34% of the Norwegian, 25% of the German and 22% of Swedish respondents gave the positive answers.

Different attractions normally will attract different types of visitors. The families with small children are more prefer amusement parks, such as Legoland, Lalandia, Faarup sommenland, Djurs sommerland, BonBon-land, and zoos. Grown-up visitors more prefer to the cities, including visiting opera house, museums, and doing other cultural activities. Apart from the above mentioned attractions, the survey concluded that the clean environment, beautiful nature, (beaches, bicycling and sailing) and its unique Scandinavian food can also be good marketing themes for attracting tourists to Denmark

Impact of tourist attractions
– case studies and results from the regional economic model

Around 55 – 60 000 persons are employed in the culture industry in Denmark. The five of branches as mentioned above, such as theatres and concerts, museums, amusement parks, botanical gardens and zoos and commercial sports, have employment of app. 23600 persons, accounting for 42% of the employment in the culture industry. The tourist attractions due to the visitors coming to the regions give both direct employment to the regions and also indirect and induced effects to the region and the country.

The Danish inter-regional macroeconomic model is applied in the scenario analysis. The model is constructed with the regional input-output tables and tourism and culture satellite accounts. Due to the economical linkage between the regions through trade, commuting, shopping and tourism, the impact of growth at one sector in one region will give spill-over effects to the other regions. The detailed description of the Danish inter-regional macroeconomic model (called LINE model) with its tourism sub-models and the application was given by Zhang, Madsen and Jensen-Butler (2007) and Madsen and Zhang (2010). The scenario analysis adopts the methods of the short-terms effect by giving the model a shock change. The starting point for the model analysis is assuming that the analyst attraction is shut down, i.e. the demand for this branch in certain region becomes zero. The direct effects are apparently shown by lay-off of employment at this sector and this region. The total effects of this closing-down will spread to other sectors and other regions. The multiplier is calculated by dividing the total effects by the direct effect, representing the spill-over effects.

This section presents the results of four scenarios analyses on tourist attractions. Four cases are selected: 1) Tivoli in Copenhagen; 2) Legoland in Billund; 3) six museums in the Capital region; and 4) the zoo in Copenhagen area.

Tivoli

Tivoli opened its garden to the public in 1843 – it is one of oldest amusement parks in Denmark. Tivoli was inspired by the so-called romantic pleasure gardens of Europe. The garden was landscaped according to the English tradition of forming naturalistic ornaments, as opposed to the French style with its strong, geometric lines. Today's Tivoli is still the leading amusement park in Copenhagen and in Denmark, playing en importance role in the Danish society as one of major cultural institutions. Tivoli hosts many restaurants, cafés, concert hall and theatre, circus, shops and playing grounds, apart from the garden itself where it has a famous Chinese-styled tower. The number of visitors from starting year's (1843) 175 000 has grown to yearly approximately 4 million visitors. The gross income is 622 million in 2009 and it has employed 1700 persons including all the businesses inside the Tivoli.

Table 6 presents the results of employment effect of Tivoli scenario. The direct employment effect is 1694 persons, where 84% of employed persons stayed in the Capital regions. The total employment effects give 2681 persons and the multiplier is 1.6.

Legoland

Legoland opened for its first amusement park at Billund in the southern part of Denmark in 1968. The park's 38,000 m2 covered with houses, landscapes, moving trains, sailing

Table 6 Employment effects with four scenario analysis

Scenario	by region/DK	Direct effects	Total effects	Multiplier
Tivoli	Copenhagen	698	1,152	1.7
	Capital region incl. CPH	1,426	2,151	1.5
	Rest of Denmark	268	530	2.0
	Total in Denmark	1,694	2,681	1.6
Legoland	Billiund	120	146	1.2
	Region of South Denmark	183	220	1.2
	Rest of Denmark	17	124	7.3
	Total in Denmark	200	344	1.7
Six museums	Copenhagen	544	733	1.3
	Capital region incl. CPH	1,003	1,472	1.5
	Rest of Denmark	95	277	2.9
	Total in Denmark	1,098	1,749	1.6
Zoo in Copenhagen	Copenhagen	78	100	1.3
	Capital region incl. CPH	196	258	1.3
	Rest of Denmark	26	68	2.6
	Total in Denmark	222	326	1.5

Source: from the model calculation.

ships, as an outdoor exhibition for which the whole show is built of ordinary LEGO bricks. From year to year LEGO parks have developed from a Miniland LEGO bricks to the newly opened parks with a huge LEGO train, a traffic school, an Indian camp and a puppet and a doll collection. They have now more and more concentrate self on giving visitors unique and marvelous experiences.

Legoland was a success beyond all expectations. Just the first year 625,000 happy guests visited park as quickly became the most popular tourist attraction outside Copenhagen. It has continually growing based on the innovative expansion. The park today is 140,000 m2 and has around 1.6 million visitors every year.

Since its start in 1968 until 2005, Legoland was owned by the Krik Kristiansen family. In 2005, it was sold to an American investment firm "The Blackstone Group", and the parks have been part of the European family entertainment company Merlin Entertainments Group, which owns and operates branded icons: the four Legoland parks, three Legoland

Discovery Centre, 9 Madame Tussauds, the Merlin Entertainments London Eye, 2 Earth Explorers, and many others. Merlin Entertainments Group has over 38 million visitors a year in the total 64 attractions and six of their hotels. They are thus the largest company in the amusement parks. Legoland parks are currently extending its business into Florida USA, Malaysia and later in Dubai.

Table 6 presents the results of the model calculation for Legoland scenario. The direct employment effect at Legoland is around 200 persons, where 92% of employed persons live in the regions of the southern Denmark. The total employment effects give 344 persons and the multiplier is 1.7.

Museums

The six main museums in Copenhagen are included in the scenario analysis, including the National Museum of Denmark, National Gallery of Denmark, Natural History Museum, Ny Carlsberg Glyptotek, Rosenborg Slot, and Louisana Museum.

The National Museum in Copenhagen is the largest museum of cultural history, comprising the histories of Danish and foreign cultures, alike. It is also a research based institution, where the research on cultural history and on preservation and conservation is equivalent to the university level. The museum has engaged in a number of national commitments, particularly within the some key areas, such as archaeology, ethnology, natural science, conservation, etc. History of the national museum trace back to 1650, later for this collection and extensions it was later added the other different buildings housed through time exhibitions.

National Gallery of Denmark: As a national gallery, according to the Museum Act, the museum's mission is to collect, preserve, record, disseminate, and showcase Danish and foreign art. Among the foreign art museum has primarily works from the Western culture after 1300 AD. Most of the museum's older collection of Danish art comes from the Danish kings art chambers.

The museum was established around 1750, after the museum is separate from the national museum as a collection only for paintings. The King Frederick made large purchases of paintings by Italian, Dutch and German schools, to ensure that the stock was not behind other European tycoons galleries. The purchases continued, during the 19th century, it bought works almost exclusively by Danish artists. The National Museum of Gallery has a very rich collection of paintings from the Danish Golden Age. It was a direct consequence of the establishment of the Royal Danish Academy of Fine Arts in 1754. The collections were opened to the public in 1827.

The Natural History Museum (SNM) was established on 1 January 2004 by the merging of four separate institutions: the Botanic Garden, the Botanical Museum and Library, the Geological Museum and the Zoological Museum. SNM is now a department of the University of Copenhagen.

The museum is responsible for maintaining and building up natural history collections, for carrying out research in the natural sciences, and for presenting the current state of knowledge about natural history to the general public. The museum's exhibitions in particular play an important role in teaching and public outreach. As the country's principal natural history museum, the museum gives specialist support to other natural history museums in Denmark. It is also here that unusual and valuable finds of natural historical interest, such as rare fossils or meteorites, are reported, examined, and collected.

Ny Carlsberg Glyptothek was founded by Carl Jacobsen, who donated his private collection to Copenhagen in 1899. It was the state and municipality in charge of construction of the museum, which was designed by William Dahlerup and the subsequent extension 1906 by Hack Kampmann.

Ny Carlsberg Glyptothek contains an art collection in the world and enjoys great international recognition. It houses more than 10,000 works of art - both ancient and modern sculptures and paintings.

Louisiana is located in North Zealand and evolves in its own special way. Louisiana opened in 1958 with a collection of modern Danish art. Already from the mid-60s changed Louisiana from being a predominantly Danish collection to become an international museum with numerous international masterpieces.

Louisiana’s collection consists of 3,000 works, many of international importance. It is based on the time after 1945 and includes virtually every genre - with an emphasis on painting and sculpture. In the collection are masterpieces by Picasso, Giacometti, Dubuffet, Yves Klein, Andy Warhol, Rauschenberg, Henry Moore, Louise Bourgeois, Philip Guston, Morris Louis, Jorn, Baselitz, Polke, Kiefer, Kirkeby and many others.

The six museums employ around 1100 persons with the total gross revenue of 700 million Danish kroner. Table 6 presents the results of the model calculation for the employment effects of the six museums. The direct employment effect at the six museums is 1100 persons, where 91% of employed persons live in the Capital region. The total employment effects give 1749 persons and the multiplier is 1.6.

The zoo at Frederiksberg

Copenhagen Zoo is one of Europe's oldest zoos. It was founded as a private institution in 1859 by Danish ornithologist Niels Kjaerbolling. After visiting the Berlin Zoo in 1851 was Kjaerbolling determined that Copenhagen on an equal footing with other European capitals should have a zoo. Kjaerbolling wrote in early June 1859 to King Frederik VII and asked for permission to bring a small menagerie in Frederiksberg Garden west of Frederiksberg Castle.

A pleasure garden, which lay west of Frederiksberg Castle, "Princess Vilhelmine Garden", was of the Directorate of the royal gardens left to Niels Kjaerbolling for 10 years, even without hire. Within no time, some simple cages timbers together, and Copenhagen's new attraction was opened on 20 September 1859. The new zoo was not larger than 4,000 hectares - an area equivalent to the current area where the restaurant and restaurant space is located.

After the second World, Zoo managed to obtain 4 ha of Søndermarken. This new part of the Zoo was associated with the old part of the Gardens by a tunnel under Roskildevej. Garden area was now 11 hectares, which is the size today. During the 1980s and 1990s, a number of modernizations and new construction projects were carried out. In 1999 the Zoo presented its future vision of the "perspective Plan 2010" The plan describes the development and construction projects in the coming years.

The purpose of Zoo is described as follows: through a modern demonstration of characteristic animal forms that are suitable to local conditions. Zoo acts as a cultural institution with social tasks of 'recreational type', 'informative' and 'scientific'. Aim of Zoo is to raise interest in and understanding of nature and its diversity through experiences based on one case, activating and entertaining presentation.

The employment effects are shown in Table 6. The total employment effects are 326 jobs versus the direct effects of 222 jobs and the multiplier is given by 1.5.

Conclusion

Unlike the other research paper on tourist attractions, this paper focuses on the development of tourist attractions base on the statistical data and the regional modelling approaches. The point of departure is that tourist attractions are culture branches within the culture industry. By applying the national accounts and satellite accounts methods, it gives rather detailed mapping of development by different types of tourist attraction. By applying the Danish regional macroeconomic model, the paper shows that tourist attractions play the economic contribution of the tourist attraction in the Danish regions by case studies.

Tourism attractions are both the phenomenon of tourism and culture. Investigation on definitions of culture, culture industry, and characteristic products in the tourism satellite accounts, it is found that tourist attractions are embedded with both tourism and culture features. Actually it has been included in both tourism satellite accounts and culture satellite accounts. Tourists who are mostly interested in the tourist attraction, such museums, art galleries, amusement parks, are often called “culture tourists”. From “culture tourism” to “creative tourism” has become a focus in the tourism research. This type of research needs to be further studied due to the rise both from the supply side and demand side.

As shown from this paper the gross output and employment in the tourist attractions experienced a growth in the last 10 years in Denmark. On the other hand, the demand recorded by the number of visitors at attractions has also continuously risen. Further information and statistics are needed concerning tourist attractions, such as regional investment in tourist attractions, relationship between the development of attractions and the investment in infrastructure, as well functional role by private and public actors relating to tourist attractions.

Using the survey results by VisitDenmark, it is shown that tourist attractions have an influence on tourists’ choice on their destinations. Tourist attractions surely play an important role in tourism marketing and the destination branding. Through some case studies the paper presents the economic impacts of tourist attraction on the regions. Three types of tourist attractions are chosen as case studies, they are, amusement parks, museums and zoos. The Danish inter-regional model is applied for analyzing the economic and employment effects of these tourist attractions. Multipliers of these tourist attractions show that the they generated employment not only for the sector itself, but it has also the spill over effects, providing employment in the other branches and other regions.

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