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Perspective of Sustainable Rural Tourism in the United Kingdom of Great Britain and Northern Ireland (UK): Comparative Study of β and σ Convergence in the Economic Development Regions

Gina Ionela Butnaru ^{1,*} and Alina Petronela Haller ²

¹ Department of Management, Marketing and Business Administration, Alexandru Ioan Cuza University of Iași, Bulevardul Carol I 11, 700506 Iași, Romania

² Department of Economics, Romanian Academy Branch of Iași + ICES, Gh. Zane, Codrescu 2, 700488 Iași, Romania; hallalina@yahoo.com

* Correspondence: gina.butnaru@uaic.ro; Tel.: +40-232-201-453

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Abstract: Tourism is an activity which globally develops proportionally with the evolution of progress. The opportunities we enjoy are bigger than ever, but their price should be lowered in order for the global society to develop its wealth. This can be performed by sustainability, a concept which will join in the future all economic activities, not only tourism. Our analysis is focused on the specific case of the UK, one of the main tourist destinations in the world. It is well known that cultural tourism is the form attracting the highest number of foreign visitors. However, we can see the importance given to rural tourism. The main methods used to perform the present analysis are β and σ convergence. They proved their efficiency in other research studies, which led to a high degree of accuracy of the results. β and σ convergence analysis is performed on a sample of 12 Economic Development Regions from the UK, among which we will determine the degree of convergence and divergence of sustainable rural tourism.

Keywords: rural tourism; rural development; sustainable tourism; β convergence; σ convergence; United Kingdom of Great Britain and Northern Ireland (UK)

1. Introduction

Rural tourism has a long history in the UK, especially in the western regions of the country; in Dorset, Devon, and Cornwall; and in the southwest of Highlands, Scotland [1], which were accompanied by the development of tourist activities that helped them maintain a market share rather stable in time. Development of rural tourism in the UK is based on the development of transport, initially of the railroads in 19th century. In the 1950s and 1960s, tourism development was registered in the coastal resorts, while the 1970s and 1980s recorded a high decrease as a result of the market development of tourist service packages for Mediterranean Sea. In this period, rural tourism registered a relatively stable market share. Inevitably, most of the people working in rural tourism can offer accommodation services or visits to tourist objectives. In addition, cooperative businesses with 20–30 members developed in this period, some of which had started to function since the end of the 1940s. In the analysis of tourism in the UK in the 1980s, we identified a series of factors with a major influence over rural tourism, including major changes of agricultural policies of the European Community for UK Government; control of urbanization by moving the population from the big cities towards small towns and rural areas; higher awareness for sustainable tourism and green tourism in an adequate context for rural tourism; higher perception of rural tourism among the

Government representatives due to its economic potential and occupation of work force; and thorough study of educational needs with major implications in the preparation of specialists for this field of activity. According to the Government UK in 2015, 42.1% of enterprises, 25.7% of turnover and 44.4% of employment was in rural tourism industry, making it the largest division. In rural England, 10.6% of local business units are in tourism related industries. In addition, the visitors from rural areas spent £3 billion (of which £200 million were expenses in rural tourism), and there were 850 million tourists and 1900 million visitors. The main travel reasons were countryside visits for the landscape, friendly people, quietness and peace. In 1980, national organizations were established, recognizing and supporting the development of small businesses in rural environment, as follows: The British Tourist Authority, Farm Holiday Bureau (now it has agricultural cooperatives), Scottish Farmhouse Holidays (for tourist accommodation services in rural environment), Wolsey Lodges (for the cooperative members who sell accommodation services), and Classic Cottages (family business offering renting services for tourist cottages).

Regarding the development of rural tourism in the UK, we can see that there is an involvement and cooperation among the companies working in this field of activity. Consequently, the European Commission, UK Government, and non-governmental organizations are interested in the development of rural areas.

Up to 2020, UK intends to diversify the tourist offer in the rural area to create opportunities of development of local environment and communities [2]. Rural tourism does not involve only the development of a single activity, it is the accumulation of several activities [3], which sometimes are underestimated, but extremely important for UK economy. Consequently, rural tourism is among the most efficient sectors of the domestic market, and it brings a significant income to UK from the external markets [4]. In UK, it is based on educational progress, on the strong need to spend the leisure time in a different environment, on the development of communications and transport, and on traditional and authentic experiences [5].

UK rural environment offers the perspective of diversification of the tourist activity with extensive possibilities, without any relation to the niche [6], and rural tourism is promoted by authorized institutions [7], by specific programs, and supported by funds created on this purpose, e.g., in the case of Scotland: Tourism Innovation Fund, Visit Scotland Growth Fund, and Scottish Rural Development Programme [8].

2. Some Theories that Formed the Basis of This Study

The contexts where sustainable rural tourism in UK was analyzed were different. Hall et al. (2005) [9] made the connection between rural tourism and (sustainable) business environment, demonstrating that tourist activity is creating workplaces, constituting a development factor for rural areas. A parallel between Canada and UK shows that rural tourism played, in time, an important role in UK, especially in Scottish Highlands [10], and Bakewell (UK). Not only the two rural regions are located in different geographical areas, but they are also in different phases of development (life cycle) [11]. Gastronomic tourism and its role in supporting the regional identity in Cornwall, Southwest of England, represented another subject directly correlated with rural tourism from the point of view of rural recovery, and agricultural diversification [12]. In a study conducted by Alexander and McKenna in 1998 [13], the conclusions show that regarding rural tourism development, Central England is considered a peripheral area. The authors of this study tried to find solutions to improve this situation. Sustainable rural tourism may develop with an impulse from the authorities. Their involvement creates the conditions of a better integration of tourist activity in strategic spatial planning, and in local community development [14].

The study of local leadership was also interesting in the particular case of the region Adventa—Monmouthshire (UK) [15]. The economic policy is important for the development of sustainable rural tourism in UK, and the national, urban, and rural tourist policy suffered modifications under EU super-national influences, determining its uneven development [16]. At the same time,

certification is also important for the development of sustainable rural tourism, subject approached in the research regarding UK [17]. The role of certification was analyzed in the case of West England regarding tourism impact on the environment, financial effects, marketing opportunities, brand recognition, and image improvement, moral responsibility, and political decisions.

The concerns for the environmental protection, also for the health of the people who travel on the territory of the UK led to the development of rural tourism and to a higher number of countryside holidays. The farms belong to the rural environment, and sustainable tourism is related to their diversification in England and Wales but the farm dimension and type influence the activity diversification [18]. At present, in the UK, rural tourism industry is still very fragmented and lacking coordination, because the visitors are looking for a sophisticated level of technology regarding the equipment and the accommodation services offered.

According to Dvoroková (2014) [19], for the economies of a state, β and σ economic convergence was and still is focusing the attention, and it represents one of the basic conditions to consolidate competitiveness externally, being also a prerequisite for a growing cohesion in Great Britain. Consequently, real convergence may be influenced by several factors, both positively and negatively. Therefore, this paper intends to analyze by a rigorous documentation β and σ convergence in UK Economic Development Regions, performing a rural tourism analysis.

In the elaboration of the first part of this paper, we performed the analysis of the economic impact of tourism in UK, with an emphasis on rural tourism, demonstrated by an analysis of the data obtained from reports provided by Eurostat, European Union, European Commission, VisitEngland, World Tourism Organisation, and World Travel & Tourism Council. In the second part, we performed a linear correlation for Gross Domestic Product from Tourism (GDPT) by UK Economic Development Regions, to establish the convergence or the divergence, if any, with the purpose to identify the main objectives of the effort of convergence. At the end of the paper we proposed a specific model of rural tourism for UK by presenting the challenges and opportunities of this field of activity. Research on sustainable rural tourism in UK has already been performed, however, the analyses of these studies with the help of β and σ convergence are relatively new.

3. Literature Review

3.1. Analysis of Tourism in the UK

The increasing progress, the improvement of the level of knowledge and, generally, life dynamics create possibilities and the wish to travel, to discover, to interact with places, people, and events. The possibility to cover enormous geographical distances in a relatively short time, comfortably and at reasonable prices, determines people to travel where they desire to satisfy their various needs, from relaxation to knowledge.

World Travel and Tourism Council (WTTC) [20–22] analyze in detail the economic impact of 184 countries, including the UK. In 2015, the growth rate of the tourism sector (2.8%) was higher than the global one (2.3%), with a contribution of 9.8% to the global GDP (Gross Domestic Product), or of 7.2 trillion dollars, in absolute terms [23]. In addition, tourism sector created 284 million workplaces, which means that, in the world, 1 of 11 workplaces is in the tourism sector. The world is threatened by economic, social, environmental, technological, geopolitical risks with a strong impact, which travel lovers assume not from ignorance, but from their desire to go where they had not gone before. One of the destinations preferred by tourists is the UK.

We present very shortly the direct and total impact on the GDP of UK tourism sector for 2015, the estimates for 2016, and the prognoses for 2026. British tourism sector registered significant growth rates for the fifth consecutive year.

Tourism sector had a direct impact of 3.7% of GDP, and the estimates and prognoses maintain the growing tendency. The direct impact of the tourism sector was estimated to grow by 3.8% in 2016, and by 4% in 2026.

By direct contribution, tourism sector created 1,791,000 workplaces on the territory of the UK, which means 5.3% of the total. For the following ten years, the prognoses lead towards a positive direct impact on the labor market of 6%.

UK takes the tenth place in WTTC hierarchy from the point of view of the impact over the labor market. Directly, tourism created 1,791,200 workplaces in 2015. By comparison, in USA the same sector contributed to the creation of 5,633,200 workplaces (3rd place), and in Germany (6th place) to the creation of 3,010,600 workplaces. The number of workplaces created by the tourism sector in the UK was 2.1 times higher than the global average, and 5.9 times higher than the European average.

From the point of view of the direct contribution to GDP, in 2015 the UK took the 5th place in WTTC hierarchy, with 103.7 billion dollars. By comparison, USA was on the first place (488 billion dollars), Germany was on the 3rd place (130.7 billion dollars), Japan on the 4th place (106.7 billion dollars). The direct contribution to GDP of UK tourism sector was 5.6 times higher than the global average, and 6.9 times higher than the European one.

Total contribution of the tourism sector to GDP was 11% in 2015. In 2016, it was estimated to grow by 4%, and in 2026 it was estimated to grow by 3%. Cumulatively, the direct and indirect total impact of the tourism sector on the labor market was 12.7% in 2015, the equivalent of 4,293,000 workplaces. The estimates foresee a growth by 2.2% of tourism total contribution on the labor market for 2016, and the estimates for the next decade show a growth by 1.3%.

Considering the total impact of the tourism sector on UK labor market, the country is in the 11th place in WTTC hierarchy, with 4,293,200 workplaces created in 2015. In USA, 14,247,900 workplaces were created by tourism, consequently it is in the 3rd place; in Germany, there were 5,234,600 workplaces, placing it on the 9th position; followed by Japan, where tourism determined the creation of 4,722,300 new workplaces. The total contribution of tourism on the labor market in the case of the UK was two times higher than the world average, and 5.6 times higher than the European one.

The total contribution of tourism sector to the GDP of the UK is 3 times higher than the direct one, which shows that the direct, indirect, and induced effects of tourist activity on UK economy are substantial: 32.9% direct effects, 20.3% induced effects, and 46.8% indirect effects.

From the point of view of the total contribution to GDP, the UK is placed on the 4th position in WTTC hierarchy, with 315.6 billion dollars, while USA takes the first place (1469.8 billion dollars), and Japan takes the 3rd place (326.1 billion dollars). The total contribution of the tourism sector to GDP was, in the case of the UK, 5.6 times higher than the global average, and 7.8 times higher than the European one.

In 2015, the tourism sector participated with 4.4% in the total investments of the UK. Tourism investments will continue, so their growth was estimated by 5.6% from the total investments in 2016, and the estimates show an increase of investments by 3% in 2026.

The analysis of the investments performed by tourism industry places the UK in the 8th place in WTTC hierarchy in 2015, with 21.5 billion dollars. USA is in the first place, in this country the tourism sector made investments of 148.8 billion dollars; France is in the 4th place, with investments of 33 billion dollars; followed by Japan with 32.8 billion dollars; and Germany with investments of 27.8 billion dollars. The investments made by the tourism sector in the UK are 5 times higher than the world average, and 5.3 times higher than the European one.

In WTTC hierarchy, from the point of view of the contribution of tourism to GDP, in absolute terms the UK takes the 4th place, and in relative terms it takes the 70th place. From the point of view of the estimates of growth in 2016, it is in the 58th place, and from the point of view of the estimates of growth on long term, i.e., 2016–2026, it is in the 152nd place.

The expenses which local and foreign tourists made on the territory of the UK for recreational activities (leisure travel spending) were 60.5% of the direct contribution of the tourism sector to GDP in 2015, while the expenses of the visitors who travelled for business were 39.5%. The estimates and prognoses illustrate a maintenance of the growing tendency of tourists' expenses, regardless of the origin or of the purpose of tourist activities. Local tourists made 80.6% of the tourist expenses, while foreign visitors spent on the territory of the UK 19.4% of the total. Tourists' expenses will increase.

The estimates for 2016 show a growth by 3.2% of local tourists' expenses, and by 2.6% of the expenses made by foreign tourists, and the prognoses for 2026 show a growth of local tourists' expenses by 3.9%, and a growth by 4.6% of foreign tourists' expenses.

Tourism statistical picture of the UK presents the country as one of the most important world destinations, with development perspectives in the following decade.

3.2. Tourist Activity and Its Specific Importance, with Focus on Rural Tourism

History and culture of the UK, well spread in the whole world by English language and colonialism, make it a very popular tourist destination, especially for its capital, London.

Based on the statistical data provided by Eurostat, we estimate that the number of tourists grew by 120% as compared to 1979, however their expenses for British services remained at an almost similar level. The average of expenses for each tourist arrived in England decreased from 1076 euro to 684 euro [23]. At the same time, the number of visitors who intended to spend their holidays with their families grew by 250% as compared to the same year of reference, 1979, their number being of approximately eight million. In 1979, the internal income from tourism was higher with almost three billion euro than the British' expenses abroad. Today the report is reversed, the British spend twice as much in external locations than the tourists who come to England [24].

In 2015, the top seven most important visited cities in the UK were London, Edinburgh, Manchester, Birmingham, Glasgow, Liverpool and Oxford [25]. Regarding the visitors' country of origin, the top three places of those who chose to visit London tourist destination between 2010 and 2015 are taken by France, USA and Germany.

Most of the time, in tourism, it may be very difficult to establish with precision the number of visitors for tourist attractions in general, because some companies in this field of activity or sites may have a different purpose in processing such information. Nevertheless, in the UK, over 5000 attractions are estimated for tourists who intend to visit these places [26].

Regarding the rural tourism, VisitEngland Report with the title *Domestic Rural Tourism in 2014 for England* [27] presents a series of statistical information for the UK. In 2014, the holidays in rural areas attracted approximately 9.21 million visitors, of which East Midlands Region attracted 1.12 million visitors, followed by East of England with 0.95 million visitors. In total, 3.57 million visitors preferred open air activities, including long walks; 2.77 million people visited important rural tourist objectives; and 2.14 million people preferred to visit historical and heritage rural sites.

Though the number of travels from the rural environment decreased in 2014 compared to the period 2009–2013, it still registers an increase compared to 2008 (year of reference), with an annual average growth rate almost equal to the national average.

Rural destinations of the UK are considered safe, welcoming, and comfortable—they are very attractive compared to other types of holidays. This makes the rural destinations preferred for relaxation, walking, and visiting parks and gardens, which are also a great joy for the visitors. The owners of rural businesses make big investments, rural attractions offering several facilities and services—especially shops and catering systems—in compliance with the type of tourist destination and with visitors' consumption needs. Furthermore, rural attractions are more susceptible by comparison to other types of tourist attractions, and the personnel employed is trained and motivated to maintain the highest standards for the visitors.

3.3. An Economic Perspective over Sustainable Rural Tourism in the UK

Tourism industry, at a global level, contributes 10% to GDP [28]. Though mass tourism continues to dominate on an international level, alternative or sustainable tourism is also present among the types of tourism.

The concept of sustainable tourism comes from sustainable development. The latter became known in 1987, at the same time with the publication of the famous Brundtland Report (Our Common Future), which stated that the satisfaction of present needs is performed without affecting the capacity

of future generations to satisfy their own needs, i.e., by sustainable development. In 1992, at Rio de Janeiro, at the famous Earth Summit, Agenda 21 refers to tourism as a potential remedy to social and environmental problems, favoring the appearance of the concept of sustainable tourism. In 2003, the European Commission adopted formal measures to support sustainable tourism.

Sustainable tourism is a form of tourism with low negative impact over the environment and local culture, generating income, workplaces, preserving the fauna, flora and ecosystem of the area, responsibly correcting the economic activity. The role of sustainable tourism is to reduce negative externalities associated to tourist activity.

The reasons for which the entire tourist activity should become sustainable are due to its main components [29]: responsibility towards the environment (ecological sustainability), local economy vitality (economic sustainability), cultural diversity (socio-cultural sustainability), and accumulation of experiences. Sustainable tourism is a relation among tourist destinations, tourist industry, inhabitants of local communities, and visitors [30]. In the past, this relation was dominated by tourist industry, but sustainability eliminates the tension among the three sides of the triangle, and maintains the balance in the long term.

Any tourist destination, and any form of tourism will last in time only if sustainability principles are applied. Ignoring them would reduce the degree of competitiveness of the tourist destination, due to major visual modifications, and others. A destination attracts tourists by itself, because it is notorious and indirectly promoted, if it already observes the principles of sustainability, or if there are efforts to attract tourists by actions which will change the image of the place, and not only by marketing strategies.

Overpopulation of the big cities and excessive pollution due to tourist activities lead to unfavorable consequences which will affect the economy and the society directly and indirectly in time. Without the application of the principles of sustainability, tourism risks to become an income generating activity, whose level will not compensate the associated costs.

Tourism in the UK needs to be circumscribed to the principles of sustainability. In the future, the potential of development of this activity in the UK is high [31], because communication and transport technologies and infrastructure develop continuously, opening the possibility of physical and financial access to various destinations, the life standard grows everywhere in the world, so people from developing countries can have the possibility to travel (most certainly, the emerging states will shortly become important markets emitting tourists), investments are increased, and promotion campaigns are intensified.

Risks correlated with tourist sustainability in the UK appear from the excess capacity of tourism industry, which confer to the visitor the power to decide what can to buy [32]. In the UK, cultural tourism enjoys a real success, proved by millions de visitors who choose this form of tourism every year, and who place the United Kingdom, by their interest for museums and culture, in the group of the most important destinations in the world. Overpopulation of some destinations, which are already overpopulated, is opposed to the principles of sustainability; consequently, it is necessary to manage the tourist activity adequately to balance the relationship among tourism-daily activities-improvement of living conditions (pollution control, traffic fluidization, and lowering of social risks such as threats to people's safety, or acts of violence).

An overview of the level of development of the UK requires an analysis of Gross Domestic Product (GDP) presented on the Economic Development Regions, an important indicator for the category of structural transformations and macroeconomic balances (Table 1).

Gross Domestic Product directly from Tourism is the part of GDP directly attributed to internal tourism consumption as part of added value (at basic prices), generated by all the industries as an answer to the internal tourism consumption, to which it is added the sum of net taxes on production and imports included at acquisition costs. This part of GDP is called Gross Domestic Product directly from Tourism (GDPT is the part of GDP generated by all the industries as an answer to the internal tourist consumption, to which it is added the sum of net taxes on production and imports included at purchase prices.). For the 12 Economic Development Regions of the UK, GDPT generated an average contribution of 3.67% of GDP corresponding to the period between 2005 and 2014 [33].

Table 1. Gross Domestic Product (GDP) according to the standard of purchasing power (SPP), in relationship with the average of EU-28 level, by regions at NUTS 2 level, 2014 (percent of the average of EU-28 level, EU-28 = 100) (EUR/inhabitant).

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
England	32,126	33,937	35,752	31,447	27,585	30,087	30,928	34,212	34,072	37,721
North East England	24,219	25,672	26,390	23,056	20,037	21,601	22,150	24,237	23,867	26,094
Yorkshire and Humber	26,731	28,206	29,906	25,875	22,893	24,340	24,773	27,019	26,569	29,052
East Midlands	26,429	28,044	29,459	25,756	22,238	24,622	25,289	27,686	27,767	30,575
East of England	30,415	32,425	33,562	29,831	25,789	27,994	28,455	31,290	30,987	34,549
London	50,565	53,028	57,144	50,721	45,011	49,081	52,261	57,987	58,008	65,616
South East (excluding London)	33,925	35,740	37,551	33,230	29,075	32,072	32,832	36,819	36,683	40,295
South West England	28,754	30,186	32,015	28,162	24,910	27,382	27,454	30,192	30,089	33,137
West Midlands	26,803	28,236	29,137	25,276	21,687	23,851	24,557	27,209	27,069	29,525
North West England	27,394	29,371	30,577	26,636	23,555	25,398	25,201	27,889	27,846	30,410
Scotland	29,396	31,405	32,878	28,925	25,834	26,968	27,534	30,051	30,126	33,357
Wales	23,101	24,438	25,487	21,675	19,454	20,630	21,530	23,712	23,491	25,467
North of Ireland	25,510	27,477	29,495	25,096	21,663	23,164	23,520	25,843	25,337	27,504
Total per country	31,263	33,073	34,826	30,573	26,869	29,161	29,968	33,105	32,969	36,458

Source: [33].

4. The UK—Comparative Study of β and σ Convergence

4.1. Conceptual Approaches and Empirical Results of β and σ Convergence

Gap analysis is a preoccupation in economic and social research starting with Solow's neoclassical theory, which inspired growth and development analyses, improved by new methods and methodologies. Several research studies have been performed by β and σ convergence. A great interest was granted to convergence in the states or regions of the United States of America (USA), and in the member countries or regions of the European Union (EU).

USA registered a convergence conditioned by income along the 20th century, possible in conditions of mobility and absence of commercial barriers [34]. β convergence was a necessary but not sufficient condition for σ convergence in the case of the American economy between 1970 and 1998. Most American states are homogenous, β convergence and σ convergence showing that the growth rates were balanced for richer states, and higher than those registered by poor states [32].

In the EU, there is a process of real, slow, and fluctuant convergence. The 1980s represented a period when the European process of convergence was lower. Convergence was slightly faster before the 1980s and after, at the same time, with the development of the interest for social cohesion, without denying the manifestation of divergences, slower in certain European member countries or regions, and visibly faster in others, EU being by definition characterized by economic, social, and geographical discrepancies [35].

The analysis of GDP/inhabitant in the EU regions at NUTS 2 level with the help of β and σ convergence is a highly complex process. Real beta-convergence manifested within the perimeter of EU 15 and EU 27, without following a constant tendency in time [36]. β and σ convergence leads to similar conclusions as in other analyses. The 1980s marked a period of decrease of European convergence compared to previous and subsequent time intervals, the degree of manifestation being different in countries and regions.

The analysis of integration of financial markets for seven EU member countries with the help of β and σ convergence illustrated that the financial market efficiency did not support a process of convergence, though after the introduction of unique currency, signs of the process visibly started to manifest [37].

The analysis of convergence hypotheses, conducted by Marquez and Soukiazis on a group of 12 European states for the time interval 1975–1995, divided in two subperiods, 1975–1984, and 1985–1995, respectively, and of the estimates of the convergence model for 175 regions at NUTS 2 level for the

years 1987–1995, divided in three groups (regions with income/inhabitant under 75% of the EU average, with income/inhabitant lower than the EU average, and income/inhabitant higher than the EU average), draws interesting conclusions. Between 1975 and 1995, there was a moderate σ divergence, showing the growth of income/inhabitant dispersion. In absolute terms, the subperiods of 1975–1982 and 1986–1991 were marked by convergence, while 1983–1985 and 1991–1995 were marked by divergence. In contrast to σ convergence, β convergence reached different conclusions. The entire period analyzed was marked by a faster convergence in the interval 1985–1995, and by a slower convergence in the interval 1975–1984. The different results of β convergence and σ convergence show that β convergence rate is not sufficient to approximate the income/inhabitant. In absolute terms, the analysis of the regions at NUTS 2 level with the help of σ convergence illustrates an insignificant decrease of income/inhabitant dispersion like in the 1990s, with a clearly divergent tendency. β convergence showed, for the same period, that the poor regions registered higher growths than the rich ones. Considering the low convergence rate, the result may be similar to the one obtained by σ -convergence. Poor regions, with income/inhabitant under 75% of the EU average, show a strong σ and β convergence, the ones slightly under the average register lower rates, while the regions with income/inhabitant over the average do not support a convergence process. The results of this research suggest that in the long term, convergence is not assured, but the poor regions become more homogenous from the point of view of the standard of living as compared to the rest, being capable to progress without reaching the level of income/inhabitant specific to the rich regions [38].

Soukiazis (2017) ascertains that theoretical analyses support unconditional convergence of the European states, while the empirical models like β and σ convergence demonstrate the manifestation of a convergence conditioned by the manifestation of structural factors like human capital, accumulation of capital, investment process, institutional factors, certain conditions specific to the market, political factors, and macro-stability. Both theoretical and empirical models have weaknesses, but together they complete one another, emphasizing convergences and divergences as close to reality as possible [39].

Simionescu [40] analyzed the degree of convergence in the case of EU28 between 2000 and 2012, concluding that the divergence process decreased; however, there was no manifestation of an acceptable degree of convergence.

An analysis of GDP/inhabitant by the methods of β and σ convergence for all the 28 European states between 2001 and 2012, period including the economic crisis, concludes by σ convergence that poor states register higher growth rates than rich ones, conclusion validated by the method of β convergence. The latter distributes the results for the periods before and after the crisis. In the period before the crisis, β convergence shows heterogeneity for the European states, later the differences start to diminish, without manifesting the clear tendency of gap reduction in the economic performance of EU member states [41].

Dzenita (2015) studied the convergence of GDP/inhabitant in EU28, with the help of β and σ convergence methods for the years 1995–2013, subdivided in the intervals: pre-extension (1995–2003), post-extension (2004–2013), pre-crisis (2004–2008), and post-crisis (2009–2013). The results are similar to other research studies on EU countries: the growth potential of poor states is higher than the one of developed states; the results of σ convergence are in agreement with those of β convergence. The crisis slowed down the convergence process, with substantial differences from one country to the other. The highest convergence rate was registered in the post-extension period, 2004–2008, reflecting the efficiency of enlarging the Union, and the convergence was slower in the pre-adhesion period, and faster after that, even during the crisis [42].

The fact that the convergence process continued during the crisis in the EU in a lower rhythm was validated by the results of other research studies analyzing GDP/inhabitant with the help of β and σ convergence, with the amendment that, unlike the whole EU territory, within the perimeter of EU14, especially in the euro area, the crisis blocked the convergence process, manifesting elements of divergence [43].

The agreements South–South, such as ASEAN, MERCOSUR, Central and West Africa, and the process of their integration were analyzed using the methods of σ and β convergence starting from the income dynamics, leading to the conclusion that the disparities among incomes are not reduced, though there were elements of σ convergence in relation with β convergence [44].

The analyses of β and σ convergence generally reach congruent and complementary conclusions. The methods polarize countries and regions into poor and rich, they accept a relatively high degree of homogeneity among USA states and regions, and a real, slow, and fluctuant convergence in the European ones.

The results obtained determine us to credit these empirical methods, and to extend their areal of use towards other fields of research.

4.2. Materials and Methods

The methods applied involve the use of descriptive, empirical, qualitative, and quantitative instruments. The argumentation, inductive and deductive, is the result of the analysis of scientific papers, reports and statistical data illustrating and explaining the subject under research.

The quantitative method used, β and σ convergence, is an additional instrument which helped us draw the best conclusions, infirming or confirming the theoretical conclusions we reached by analysis, synthesis, argumentation, and inductive and deductive discovery.

Most frequently, the empirical studies of convergence use GDP in real terms, in conversion per capita (of inhabitant or worker). The economies of the regions with a lower GDP per capita grow faster compared to the economies of the developed regions with a higher GDP per capita. Considering this principle, a condition of homogeneity for the economies of the regions analyzed is recommended, otherwise the measurement of convergence is not possible. The sources of theoretical documentation are observational studies (e.g., case studies, description-argumentative studies), correlational (reports, statistics, comparative studies), which, together with the qualitative research, offer internal, external, and general validity to the research. In agreement with Dvoroková [19], in general poorer regions register a more dynamic growth. β convergence is characterized by a negative slope of the linear function when GDP per capita grows (GDP is an indicator depending negatively on the initial economic level). For σ convergence, we analyzed the studies conducted by Marques and Soukiazis [45], Baumol [46], Young et al. [47], and Dvoroková [19]. The conclusions of the studies show that all the regions converge towards the same level of development, with the purpose to obtain the same result (for example the growth of economic production). Therefore, σ convergence can be defined as a lowering of the variation of real GDP indicator per capita among the economies of the regions analyzed in a certain time interval.

In the present research, in agreement with Dvoroková [19], the methodology for β convergence was at the basis of the studies performed by William Baumol in 1986, when he studied real convergence among economies. In sustainable rural tourism, we can measure β convergence based on GDPT/inhabitant, using the equation proposed by Baumol as calculation method for β convergence:

$$\frac{1}{T} [\ln(y_{i,T}) - \ln(y_{i,t_0})] = \alpha + \beta \ln(y_{i,t_0}) + \varepsilon_t \quad (1)$$

where,

- T is the time interval;
- y_T is the real GDPT per worker at the end of the period of time;
- t_0 is the initial period of time;
- y_{t_0} is the real GDPT per worker at the beginning of the period of time;
- β is the slope parameter; and ε is the statistical error.

The equation proposed by Baumol in 1986 suffered some modifications, and Dvoroková [19] used the following model:

$$\frac{1}{T} \ln\left(\frac{y_{i,T}}{y_{i,0}}\right) = \alpha + \beta \ln(y_{i,0}) + \varepsilon_i \quad (2)$$

where α is a constant level.

σ convergence highlights the dispersion of the phenomenon compared to the average, or the gradual lowering of the differences among two or more chronological series.

In agreement with Iancu [48], σ convergence uses as indicator the coefficient of variation of GDPT level per inhabitant, calculated according to the formula:

$$\sigma_t = \sqrt{\frac{\sum_i [\ln(y_{i,t}) - \ln(\bar{y}_t)]^2}{(N-1)}} \quad (3)$$

where N represents the number of regions. Sala-i-Martin uses for the first time the term σ convergence in association with β convergence.

This model is used for the analysis of convergence level by the measurement of the dispersion of GDPT per inhabitant on a period of one year, using the transversal series (in this research, the Economic Development Regions of the UK are considered transversal series). The convergence indicator is relevant when analysis includes comparisons between certain Economic Development Regions. For this purpose, we use chronological series (a discrete time interval, t and $t + T$) to characterize convergence evolution (tendency). If the dispersion of the phenomenon registers a decrease in a certain time interval (i.e., the value of the indicator decreases in time), it means that the convergence phenomenon takes place, $\sigma_{t+T} < \sigma_t$, and when the dispersion is growing, it means that the divergence phenomenon takes place, $\sigma_{t+T} > \sigma_t$.

4.2.1. The Sample Analyzed

In this analysis, we used the statistical data offered by Eurostat for the values of GDP per capita in the Economic Development Regions of the UK. GDPT was calculated using the average percentage of tourism contribution to total GDP, which was obtained from the reports of the World Tourism Organisation, World Travel & Tourism Council, Eurostat, and Tourism Satellite Account (TSA) of the UK. The value of GDPT as average for the period 2005–2014 represents 3.67% of total GDP (Appendixes A–C) (Table 2).

Table 2. Gross Domestic Product from Tourism (GDPT) per capita per regions (euro/inhabitant).

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
England	1179	1246	1312	1154	1012	1104	1135	1256	1250	1384
North East England	889	942	969	846	735	793	813	890	876	958
Yorkshire and Humber	981	1035	1098	950	840	893	909	992	975	1066
East Midlands	970	1029	1081	945	816	904	928	1016	1019	1122
East of England	1116	1190	1232	1095	946	1027	1044	1148	1137	1268
London	1856	1946	2097	1861	1652	1801	1918	2128	2129	2408
South East (excluding London)	1245	1312	1378	1220	1067	1177	1205	1351	1346	1479
South West England	1055	1108	1175	1034	914	1005	1008	1108	1104	1216
West Midlands	984	1036	1069	928	796	875	901	999	993	1084
North West England	1005	1078	1122	978	864	932	925	1024	1022	1116
Scotland	1079	1153	1207	1062	948	990	1010	1103	1106	1224
Wales	848	897	935	795	714	757	790	870	862	935
North of Ireland	936	1008	1082	921	795	850	863	948	930	1009
Total per country	1147	1214	1278	1122	986	1070	1100	1215	1210	1338

Source: Data processed from bibliographical sources.

For this analysis, we chose the period between 2005 and 2014, because Eurostat database offered us information regarding GDP only for this time interval. Therefore, at the end of the period analyzed, we followed the reduction of the existing gap between the most developed region and

the less developed region of the UK. The data were organized and processed numerically with Excel programs. For the specific research, we analyzed 12 Economic Development Regions of the UK. For the evaluation of β convergence we used the equation proposed by Baumol [46], modified in the paper proposed by Dvoroková [19]. For each region, we calculated $\ln(GDPT_{2005})$, which is $(\ln(y_{i,0}))$ and $\ln(\frac{GDPT_{2014}}{GDPT_{2005}})$, which is $(\ln(\frac{y_{i,T}}{y_{i,0}}))$. The time interval T is 10 years for the period analyzed, 2005–2014. For σ convergence, we used the coefficient of variation of GDPT level per inhabitant, noted with σ . According to this model, it was necessary to calculate $\ln(\bar{y}_t)$, and N took the value of 12, corresponding to the number of regions.

4.2.2. β Convergence and σ Convergence—Estimation of Econometric Model and Interpretation of Results

Mathematically, the indicator for β convergence can be written using the following model:

$$\frac{1}{T} \ln\left(\frac{GDPT_{2014}}{GDPT_{2005}}\right) = \alpha + \beta \ln(GDPT_{2005}) + \varepsilon_i \quad (4)$$

where α is a constant, β is the slope, ε is the error, and T is the number of years for the interval between 2005 and 2014.

The results of the calculations are synthetically presented in Table 3 for GDPT values corresponding to the period between 2005 and 2014, for the 12 Economic Development Regions of the UK.

Table 3. Values for the calculation of natural logarithms.

	$\ln(GDPT_{2005})$	$\frac{1}{10} \ln\left(\frac{GDPT_{2014}}{GDPT_{2005}}\right)$
North East England	6.789902317	0.007457169
Yorkshire and Humber	6.888599171	0.008325370
East Midlands	6.877234688	0.014572669
East of England	7.017701781	0.012745450
London	7.526040219	0.026055319
South East (excluding London)	7.126932903	0.017206939
South West England	6.961546059	0.014189017
West Midlands	6.891276978	0.009675022
North West England	6.913099464	0.010446114
Scotland	6.983633586	0.012639849
Wales	6.742644945	0.009752913
North of Ireland	6.841844189	0.007524780

Source: calculations performed by the authors.

As we can see in Figure 1, the linear equation with the form $y = a + bx$ is $y = -0.152 + 0.023x$ and $R^2 = 0.863$. In Table 4, we present the estimative values for constant α and slope β .

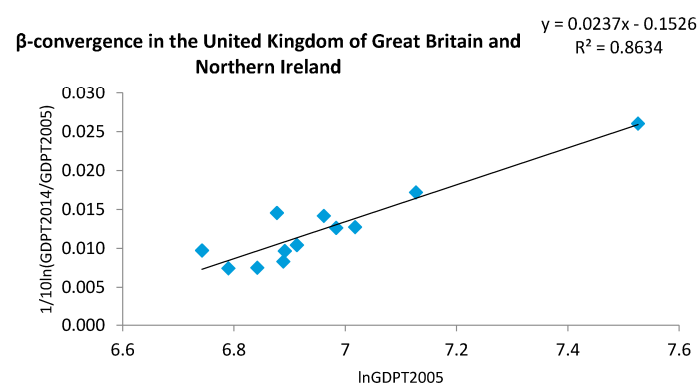


Figure 1. Linear correlation for the values calculated in the table.

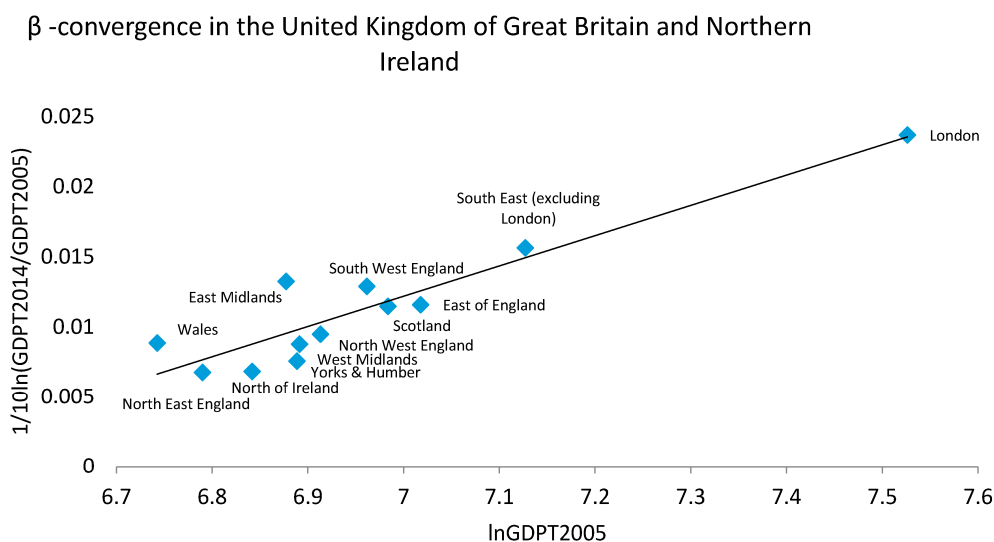
Table 4. The estimative values for constant α and slope β .

Period	α	β
2005–2014	−0.152	0.023

The mathematical model can be written as follows:

$$\frac{1}{10} \ln \left(\frac{GDPT_{2014}}{GDPT_{2005}} \right) = -0.152 + 0.023 \ln(GDPT_{2005}) \quad (5)$$

Due to the positive value of slope β (+0.023), we can see that between 2005 and 2014, in the 12 Economic Development Regions, from a tourism point of view, β convergence becomes β divergence. Specifically, the model of β convergence can be used only retroactively (i.e., in the past) to analyze the development of the level of economies from tourism, without including explicative future values for GDPT (Figure 2).

**Figure 2.** Graphical representation of the 12 Economic Development Regions of the UK according to the value of each point (Source: calculated by the authors).

The positions of certain regions on the graph shows that East Midlands, South East (excluding London), South West England, and Wales register an upward convergence, since the values of the points corresponding to the model $\frac{1}{10} \ln \left(\frac{GDPT_{2014}}{GDPT_{2005}} \right)$ are over the curve corresponding to the linear correlation. The points under the curve correspond to the regions North East England, Yorkshire and Humber, East of England, West Midlands, North West England, Scotland and North of Ireland, which register a downward convergence. As expected, London registers divergence, determined by a much higher economic development than the other regions. Since, for the period between 2005 and 2014, the results obtained generally indicate a β divergence, for future periods, a growth of GDPT could determine the modification of β convergence model. Therefore, in Table 5, we analyze GDPT values for the 12 Economic Development Regions of the UK.

In the following, we will present the σ convergence model by using the coefficient of variation σt , which will indicate the convergence level by measuring GDPT dispersion (the Gross Domestic Product directly from Tourism is the part of GDP attributed directly to the intern tourist).

Table 5. Estimation for α and β .

	GDPT (Euro/Inhabitant) 2005	GDPT (Euro/Inhabitant) 2014	Modification	Convergence
North East England	889	958	69	Downward convergence
Yorkshire and Humber	981	1066	85	Downward convergence
East Midlands	970	1122	152	Upward convergence
East of England	1116	1268	152	Downward convergence
London	1856	2408	552	Divergence
South East (excluding London)	1245	1479	234	Upward convergence
South West England	1055	1216	161	Upward convergence
West Midlands	984	1084	100	Downward convergence
North West England	1005	1116	111	Downward convergence
Scotland	1079	1224	145	Downward convergence
Wales	848	935	87	Upward convergence
North of Ireland	936	1009	73	Downward convergence

Source: Calculations performed by the authors.

The mathematical model can be written as follows:

$$\sigma_t = \sqrt{\frac{\sum_i [\ln(GDPT_{2014}) - \ln(\bar{y}_t)]^2}{(12 - 1)}} \quad (6)$$

Table 6 presents the estimative values for $\bar{y}_t$, $\ln(\bar{y}_t)$, $[\ln(GDPT_{2014}) - \ln(\bar{y}_t)]^2$ and σt .

Table 6. Estimated values for σt .

	$\bar{y}_t$ $y = 0.023x - 0.152$	$\ln(\bar{y}_t)$	$[\ln(GDPT_{2014}) - \ln(\bar{y}_t)]^2$	σt
North East England	0.004167753	−5.480378169	161.6295035	4.0203172
Yorkshire and Humber	0.006437781	−5.045571375	141.8491811	3.7662870
East Midlands	0.006176398	−5.087020054	145.4164161	3.8133504
East of England	0.009407141	−4.666286202	136.6385090	3.6964646
London	0.021098925	−3.858533186	121.0811819	3.4796721
South East (excluding London)	0.011919457	−4.429583192	149.2349708	3.8630942
South West England	0.008115559	−4.813972153	146.7241500	3.8304588
West Midlands	0.006499371	−5.036049952	147.3671247	3.8388426
North West England	0.007001288	−4.961661194	142.7950527	3.7788233
Scotland	0.008623572	−4.753255840	138.5521197	3.7222590
Wales	0.003080834	−5.782555027	166.2188021	4.0769940
North of Ireland	0.005362416	−5.228340594	145.6490463	3.8163994
				45.7029629

Source: Calculations performed by the authors.

The high value obtained for sigma convergence shows that for the period between 2005 and 2014, in the Economic Development Regions of the UK there was a high degree of spreading of GDPT dispersion. In these conditions, it is necessary to perform a much more detailed analysis, with the purpose to measure the convergence process or the divergence process, according to the values obtained for σt , calculated this time for the following pairs of time intervals: 2005–2006; 2006–2007; 2007–2008; 2008–2009; 2009–2010; 2010–2011; 2011–2012; 2012–2013; 2013–2014; and 2005–2014.

In Table 7, we present the estimated values for σt , for the 10 time intervals.

Table 7. Estimated values for σt .

	σt 2005–2006	σt 2006–2007	σt 2007–2008	σt 2008–2009	σt 2009–2010	σt 2010–2011	σt 2011–2012	σt 2012–2013	σt 2013–2014	σt 2005–2014
North East England	3.8802034	3.8104523	3.7847051	3.9648528	4.7939640	4.1594840	4.0666046	3.8790988	3.9021691	4.0203172
Yorkshire and Humber	3.7739161	3.7354002	3.7027871	3.8027256	3.9800506	3.8731838	3.8501556	3.7654282	3.7789240	3.7662870
East Midlands	3.7834295	3.7390649	3.7104064	3.8072041	4.0545417	3.8578457	3.8261939	3.7476584	3.7456549	3.8133504
East of England	3.6948014	3.6690699	3.6577229	3.7040166	3.8059517	3.7402358	3.7299357	3.6825646	3.6865971	3.6964646
London	3.6001182	3.5991740	3.5992167	3.6000324	3.6062147	3.6011373	3.5993780	3.5994245	3.5994305	3.4796721
South East (excluding London)	3.6544913	3.6406716	3.6300198	3.6608356	3.7174608	3.6730085	3.6647835	3.6339981	3.6347852	3.8630942
South West England	3.7237458	3.6983066	3.6736713	3.7363733	3.8434521	3.7554399	3.7535595	3.6982180	3.6998388	3.8304588
West Midlands	3.7717519	3.7347223	3.7162749	3.8267418	4.1424521	3.9032731	3.8612734	3.7601164	3.7639894	3.8388426
North West England	3.7551290	3.7119701	3.6924004	3.7768366	3.9240870	3.8215388	3.8300625	3.7427184	3.7437539	3.7788233
Scotland	3.7115303	3.6810860	3.6643102	3.7203396	3.8042281	3.7668786	3.7515008	3.7004384	3.6992485	3.7222590
Wales	3.9608160	3.8677055	3.8178596	4.1447659	4.3062235	4.5135725	4.1745037	3.9127367	3.9288803	4.0769940
North of Ireland	3.8169276	3.7529661	3.7097713	3.8347710	4.1470590	3.9553056	3.9266875	3.8039122	3.8241569	3.8163994
	45.1268606	44.6405894	44.3591457	45.5794951	48.1256852	46.6209036	46.0346386	44.9263127	45.0074287	45.7029629

Source: Calculations performed by the authors.

As we can see in Table 7 and Figure 3, the values obtained for σt between 2005 and 2007 register a slight decrease, followed by an increase in the interval between 2008 and 2009. The interval 2010–2014 is also marked by a slight decrease, which leads us to the conclusion that the interval 2005–2014 could be divided in two important periods from an economic point of view. It refers to the pre-crisis and post-crisis periods. Therefore, 2009 is the year when the highest value for σt was registered. Thus, we consider that it was a convergence process for the Economic Development Regions of the UK between 2005 and 2014, contradicting the value $\beta = (+0.023)$, which indicates that in the same period of time it was a divergence process. Consequently, we will analyze σt on time intervals. In this context, we can see that between 2005 and 2007 there was a convergence process due to the fact that $\sigma_{2005} < \sigma_{2006} < \sigma_{2007}$, between 2008 and 2009 there was a divergence process due to the fact that $\sigma_{2009} > \sigma_{2008}$, between 2010 and 2012 there was a convergence process due to the fact that $\sigma_{2010} < \sigma_{2011} < \sigma_{2012}$, between 2013 and 2014 there was a divergence process due to the fact that $\sigma_{2014} > \sigma_{2013}$. In conclusion, we can state that GDPT per inhabitant in the Economic Development Regions of the UK influences in a slight measure the economic development of the country, and the convergence process could take place very slowly.

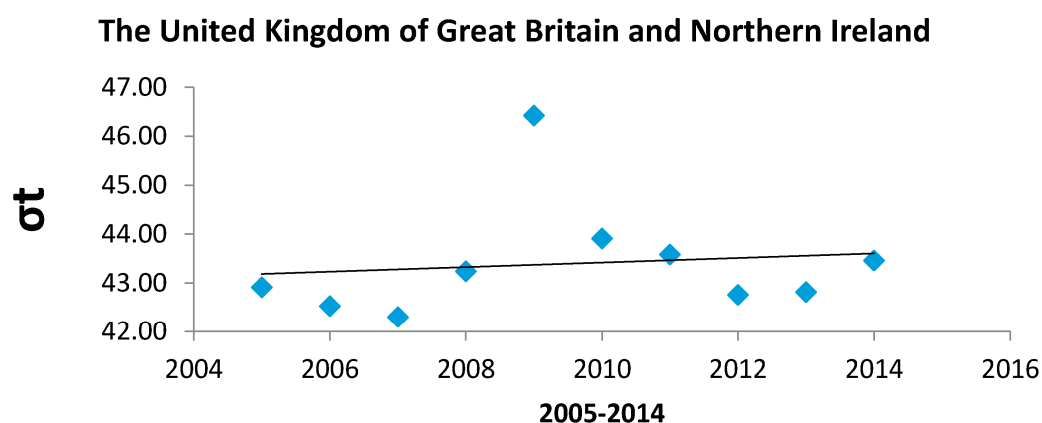


Figure 3. Graphical representation of the values obtained for σt “2005–2014”.

5. Discussion

5.1. The Specific Model of Rural Tourism for the UK

In the UK, the offer for rural tourism is distinctive and diverse, including a wide range of products and services: walking, adventure sports, horse riding, fishing, boat riding, cultural festivals, bird watching, preservation activities, business meetings and team building. Rural areas, where these activities take place, are also diverse, and they include farms, waterways, rural seashore, rural towns, villages, pubs, historical cottages, and archaeological sites, gardens, lakes, forests, mountains and landscapes, national parks and areas with remarkable natural beauties. Tourism in the rural areas of the UK creates workplaces and business opportunities when other opportunities can be limited, also maintains and protects the existing workplaces in micro-companies and companies developing independent activities in rural environment. In Yorkshire, for example, the activities from rural areas represent 39% of the total workplaces of the economy in the region, and 37% of the total economy of the UK. Rural tourism offers the possibility to supplement the flows of income of the companies operating in rural areas, and a good example could be the activity developed at the farms. This can help maintain the environment and landscape qualities, which are evaluated by both visitors and rural communities and companies. Rural tourism supports economic viability of communities from the UK. Services and local facilities, such as shops, pubs, restaurants, transport, and postal services are supported completely by the visitors of rural areas [49,50]. Rural tourism of the UK has the capacity to contribute to the preservation and capitalization of the natural environment by developing new

businesses, and by increasing the number of visitors who benefit and who are based on this type of activities developed in the rural environment. This is not always a direct contribution, but it is admitted by those who invest in this field of activity (Strategic Plan 2010–2020).

5.2. Challenges and Opportunities of Rural Tourism in the UK

The diversity of the offer of rural tourism for the UK differs from one area to the other. In different rural areas, tourism can lead, dominate, or support the economy of the UK. Nevertheless, businesses must be managed carefully to avoid the negative effects over the environment, economy and local communities. Holidays in rural environment are more susceptible for business purposes. To assure rural tourism development, destinations must develop tourist products and experiences appealing to the visitors all year long, less prone to possible climatic changes. Rural tourism offers an escape for urban population, and a series of specific activities for spending leisure time. Holidays in rural environment offer rest and quietness, and combine the beauty of the natural landscape with local architecture, food specific to the area, culture and community. This aspect represents a challenge for the developers who wish to propose businesses in the rural environment. Consumers in general are increasingly demanding, and they emphasize the development of technology to have access to rural environment information, since rural tourist products can be advertised with the help of new advertisement techniques. In the UK, the iPhone application called National Trust from the series walks and travels, and Geocaching, which was tested by several sites, are successfully used. However, the lack of connection in several rural areas may be a barrier for the users. UK Government proposed the increase of investments in rural areas for this type of projects. Since the number of companies in the field is relatively small, there is the risk that the information regarding rural tourism does not reach potential consumers at the right time, by the right means, with optimal results and satisfaction [26,51]. Rural tourism in the UK succeeded to differentiate from rural tourism of other European countries by the food specific to rural areas, products and landscapes. Therefore, it was modeled by generations, offering the opportunity to create authentic attractive experiences for visitors, making local communities proud of their history and culture. Consequently, it is very important for local communities to understand their implication in the development of rural tourism of United Kingdom, including also the benefits they can get from it.

5.3. Discussion about Future Research Directions

The research is inspirational for the theoreticians and practitioners in the field of tourism, especially rural tourism. From a normative point of view, the paper offers statistical information, and explains the frame and the presentation of tourist activity in UK rural area, offering coagulated information to those interested in this subject. In addition, β and σ convergence may be used to analyze comparatively, per regions or countries, several other aspects specific to the economic activity in general, and to the tourist activity in particular, because the convergent development is preferable to the divergent development. Consequently, there is an interest to find the regions with predisposition to develop convergently, and activities where convergence is possible. The method helps us delimitate theoretically the compatibility among regions, countries, and activities. Starting from rural tourism, the research may be extended to other activities, countries or regions than those we referred to in the present article.

From a practical point of view, the research offers information to the active economic agents in the tourist sector. By mentioning the opportunities, the convergence and divergence, the economic agents can see the favorable and unfavorable directions according to their preoccupations. The results obtained by β and σ convergence can help the economic agents in their investments, in the correct choice of the area for their activities, while the theoretical aspects of the research inform about the possibilities, places and development of their activities in UK rural area.

6. Conclusions

This paper approaches an essential subject for the economic development: sustainable rural tourism. The country analyzed is UK, the comparison being made among its Development Regions. We did not focus on tourism in general, but on a specific form of this activity, i.e., rural tourism, because it is best suited to the concept of sustainability.

We started from the idea that the interest for rural environment increased significantly, due to the decisions of Governmental authorities of the UK, and to the changes performed by agricultural policies of the European Commission in the 1980s. Statistical data confirm these affirmations regarding tourist development, which is extremely important due to increased travel opportunities in the world. Approximately 10% of the global GDP is due to tourist activity, and 1 of 11 workplaces is created by tourism.

The paper is structured in two parts, a theoretical one, and an empirical one. We described the importance of rural tourism for UK economy, and the previous contributions to the scientific research in the field, without pretending to include and synthesize the entire literature. We also considered important to present UK tourist activity from a statistical point of view to illustrate the importance, the dimensions, and the future perspectives of development.

UK is one of the main tourist destinations in the world with high potential of development, including the rural environment. The estimates and prognoses converge towards an increase of tourist activity. The tourist activity should observe the principles of sustainability, first in the rural environment associated especially to ecotourism and agritourism. In general, regardless of the form of tourism and area, sustainability requires the use of friendly concepts of environment and transport. Regarding the transport, the negative impact of product pollution should be reduced, and these characteristics are observed in British economy. Sustainable rural tourism takes into account the direct impact over the cultural inheritance and traditional activities. This is based especially on the traditional activities of each community, area identity, culture, and local preoccupations. It is developed in such a manner that the local communities get the benefits, it stimulates local economy, it creates workplaces, it gives a character of ecological sustainability, it uses local resources, including local food products and traditional production techniques, it observes traditional culture and lifestyle of the area. Any decision made for the development of sustainable tourism contributes to the improvement of life quality, and positively influences cultural identity. The great advantage of rural tourism is that it can relatively develop without depending on firms or big companies from outside the local communities, or on their decisions. Compared to other activities, tourism development in rural environment is not very expensive, which is an encouragement for the rural environment. However, it is well known that tourism and its associated activities are not isolated from the rest of local community activities. There is interdependence between tourism and different sectors and actors involved, since businessmen from the rural environment do not have resources to promote themselves. These are aspects leading to further costs and to the creation of networks and agreements of cooperation offering support and contributing to the better understanding of the businesses and marketing in rural environment.

The existing articles on sustainable rural tourism in UK illustrate an interest already manifested for this economic activity, which encouraged us to approach it from other perspective, and using other methods of analysis.

The theoretical analysis is completed by an empirical one, which explains more accurately the convergences and divergences among UK Development Regions, seen from the perspective of a niche, like rural tourism performed in the conditions of responsibility towards the environment. The empirical analysis involved the use of β and σ convergence. We considered that the most relevant indicators for our study were GDP and GDPT, taken from Eurostat statistics, specific to the Development Regions of Great Britain. We applied β and σ convergence method, but first we also analyzed other subjects researched with the help of this method. Initially, we ascertained the manifestation of a high degree of dispersion of GDPT, and we considered it was necessary to measure convergence and divergence in detail.

For the 12 regions of the UK, GDPT contributed by 3.67% to GDP between 2005 and 2014. Consequently, GDPT per capita influences very little UK economic development, and the convergence among the Development Regions is very slow.

The importance of this activity oriented us to the use of β and σ convergence to analyze convergences and divergences among tourist regions of the UK, concluding that convergent and divergent aspects are manifested on a fluctuant tendency. β and σ convergence method, applied with the help of an indicator specific to rural tourist activity, is relatively new. The knowledge of convergence and divergence in UK rural regions is important for making decisions regarding tourist politics, and for applying development strategies. Convergence proves the capacity to find similarities among regions, while divergence proves the manifestation of gaps, which require a different approach of the measures of tourist development.

7. Some Future Directions about Research of β and σ Convergence

In addition, we found that β and σ convergence method allows the comparative analysis of sustainable rural tourism by UK Development Regions, with the possibility to extend the analysis, e.g., by a comparison among countries. The conclusions may influence the decision makers in the future measures of tourist politics; the tour-operators in conceiving tourist packages according to convergence and divergence among regions; and the potential tourists in choosing their destinations. β and σ convergence is a method which can be used in the comparative analysis of any other economic activities, processes, or phenomena among regions or countries, without being restrictive.

The results validate the fact that rural tourism is an activity with potential of development in UK, even if it develops disproportionately among the Development Regions of the country. This paper opens the perspective of future research, e.g., convergence and divergence among regions in relation to rural tourism and other upstream and downstream activities.

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Author Contributions: The authors' contributions were equal. Gina Ionela Butnaru designed the research; its reasoning; collected, analyzed the data and discussed the data; and performed the paper editing. Alina Petronela Haller did the literature review, the discussed data, drew conclusions and performed the paper editing. Both authors have read and approved the final manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Gross Domestic Product (GDP) at current market prices by NUTS 2 regions, Million euro.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
England	1,640,840	1,733,378	1,826,037	1,606,162	1,408,900	1,536,700	1,579,661	1,747,405	1,740,261	1,926,600
North East England	61,907	65,622	67,457	58,934	51,218	55,216	56,619	61,955	61,009	66,700
Yorkshire and Humber	136,977	144,533	153,246	132,589	117,310	124,725	126,943	138,452	136,149	148,869
East Midlands	115,037	122,069	128,226	112,108	96,794	107,172	110,076	120,508	120,862	133,084
East of England	170,856	182,147	188,537	167,579	144,870	157,258	159,850	175,773	174,073	194,081
London	392,558	411,676	443,630	393,767	349,441	381,038	405,724	450,177	450,341	509,402
South East (excluding London)	282,179	297,273	312,336	276,398	241,835	266,765	273,083	306,253	305,120	335,161
South West England	146,894	154,210	163,552	143,872	127,257	139,887	140,253	154,239	153,713	169,288
West Midlands	145,661	153,450	158,350	137,367	117,861	129,619	133,456	147,867	147,111	160,458
North West England	188,771	202,398	210,703	183,548	162,314	175,020	173,657	192,181	191,883	209,557
Scotland	152,233	162,636	170,266	149,796	133,789	139,661	142,588	155,625	156,013	172,744
Wales	68,916	72,905	76,035	64,663	58,038	61,545	64,229	70,740	70,079	75,976
North of Ireland	44,593	48,031	51,559	43,869	37,869	40,492	41,114	45,175	44,290	48,078
Total per country	1,906,582	2,016,950	2,123,897	1,864,490	1,638,596	1,778,398	1,827,592	2,018,945	2,010,643	2,223,398

Source: [33].

Appendix B

Table A2. Gross domestic product in tourism (GDPT) at current market prices by NUTS 2 regions, Million euro.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
England	60,219	63,615	67,016	58,946	51,707	56,397	57,974	64,130	63,868	70,706
North East England	2272	2408	2476	2163	1880	2026	2078	2274	2239	2448
Yorkshire and Humber	5027	5304	5624	4866	4305	4577	4659	5081	4997	5463
East Midlands	4222	4480	4706	4114	3552	3933	4040	4423	4436	4884
East of England	6270	6685	6919	6150	5317	5771	5866	6451	6388	7123
London	14,407	15,109	16,281	14,451	12,824	13,984	14,890	16,521	16,528	18,695
South East (excluding London)	10,356	10,910	11,463	10,144	8,875	9,790	10,022	11,239	11,198	12,300
South West England	5391	5660	6002	5280	4670	5134	5147	5661	5641	6213
West Midlands	5346	5632	5811	5041	4325	4757	4898	5427	5399	5889
North West England	6928	7428	7733	6736	5957	6423	6373	7053	7042	7691
Scotland	5587	5969	6249	5498	4910	5126	5233	5711	5726	6340
Wales	2529	2676	2790	2373	2130	2259	2357	2596	2572	2788
North of Ireland	1637	1763	1892	1610	1390	1486	1509	1658	1625	1764
Total per country	69,972	74,022	77,947	68,427	60,136	65,267	67,073	74,095	73,791	81,599

Source: calculated by the authors.

Appendix C

Table A3. Population.

	2001	2011	2015	Population Average (2001 + 2011)/2
England	49,138,831	53,012,456	54,786,327	51,075,644
North East England	2,515,442	2,596,886	2,624,621	2,556,164
Yorkshire and Humber	4,964,833	5,283,733	5,390,576	5,124,283
East Midlands	4,172,174	4,533,222	4,677,038	4,352,698
East of England	5,388,140	5,846,965	6,076,451	5,617,553
London	7,322,400	8,204,407	8,538,689	7,763,404
South East (excluding London)	8,000,645	8,634,750	8,947,913	8,317,698
South West England	4,928,434	5,288,935	5,471,180	5,108,685
West Midlands	5,267,308	5,601,847	5,751,000	5,434,578
North West England	6,729,764	7,052,177	7,173,835	6,890,971
Scotland	5,062,011	5,295,403	5,373,000	5,178,707
Wales	2,903,085	3,063,456	3,099,086	2,983,271
North of Ireland	1,685,267	1,810,863	1,851,621	1,748,065
Total per country	58,789,194	63,182,178	65,110,034	60,985,686

Source: [21,22,52–64].

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