Cores and peripheries in a northern periphery: a case study in Finland

PEKKA KAUPPILA

Kauppila, Pekka (2011). Cores and peripheries in a northern periphery: a case study in Finland. *Fennia* 189: 1, pp. 20–31. Helsinki. ISSN 0015-0010.

Over the last decades, peripheral, rural areas have been faced with social and economic challenges, such as economic restructuring, unemployment, out-migration and an ageing population. Due to declining traditional industries, tourism has often been highlighted as a vehicle to revitalize the economy of rural areas. The aim of the study is to conceptualize the regional development process of resorts, in relation to their location municipalities at a local level in Finland. GIS (*Geographical Information Systems*) technology and georeferenced data, so called grid data, are utilized in the statistical socio-economic analysis of the four largest resorts – Levi, Ruka, Saariselkä and Ylläs – on the Finnish periphery. The study results show that the development process of the resorts has been very positive in terms of the indicators of regional development. Along with the absolute progressing, the relative importance of the resorts within their location municipalities has strengthened. The outcome of the study is presented in the classic core–periphery framework: the resorts are considered to be cores and the surrounding area to those cores is a periphery. As a consequence, there is an emergence of a polarization process within the municipalities under study, as a result of tourism development. It is obvious that the role of the resorts within the location municipalities in the regional development will strengthen in the future. Generally speaking, from the viewpoint of the regional development of peripheral, rural areas, the main challenge is to extend the positive socio-economic impacts of resorts, cores, to a wider geographical area, a periphery.

Keywords: northern Finland, resort tourism, GIS, regional development, core, periphery

Pekka Kauppila, Department of Geography, P.O. Box 3000, FIN-90014 University of Oulu, Finland. E-mail: pekka.kauppila@oulu.fi

Introduction

In terms of regional development, the positive socio-economic impacts of tourism have been highlighted in peripheral, rural areas that suffer from economic restructuring, unemployment, out-migration and an ageing population. Therefore, tourism literature has emphasized the role of tourism as a tool for regional development, particularly from the peripheral viewpoint (e.g. Butler et al. 1998; Müller & Jansson 2007; Saarinen 2007; Hall et al. 2009). It seems, however, that the industry has a tendency to accumulate spatially and temporally: tourism demand and supply meet at resorts. If the tourism phenomenon concentrates in resorts, it is then obvious that positive regional development – an increase in the number of enterprises, jobs and permanent population – can be discovered in those destinations.

According to Prideaux (2004: 28–29), a consensus exists, concerning the functions of resorts at a general level: they provide a large number of attractions and services for both day-trippers and overnight stayers. He, however, distinguishes macro and micro level perspectives with respect to the resort concept. The former refers to an urban community and the latter to a hotel complex with versatile entertainment and recreation services. Naturally, these two approaches have different impacts on regional development and the local community. The importance of resorts in the tourism development of Finland is manifested throughout the

URN:NBN:fi:tsv-oa4066

current tourism policy (Suomen matkailustrategia 2020 2010): one key point of the policy is resort-oriented tourism development and hence, resorts are expected to strengthen their position in both tourism demand and supply. In this light, the number of enterprises and jobs should also increase, and resorts can therefore be interpreted to also become nodes for regional development over a wider geographical area.

The aim of the study is to conceptualize the regional development process of resorts in relation to their location municipalities at a local level in Finland. The paper demonstrates that the core–periphery dichotomy can be realized within municipalities in western countries. The outcome of the study is presented in a widely cited classic regional development framework, i.e. the core–periphery framework. Generally speaking, from the viewpoint of utilizing tourism as an effective tool for regional development, the basic idea is to extend the positive socio-economic impacts of tourism from resorts, cores, to a larger geographical area, a periphery. In practice, this requires the integration of resorts and the surrounding area into one functional entity in social and economic terms, in order to alleviate regional disparities at a local level. The four largest resorts – Levi, Ruka, Saariselkä and Ylläs – in northern Finland are applied as case studies, and the number and structure of enterprises, jobs and the permanent population are used as the indicators of regional development. In Finland, resorts are not independent municipalities, but they are a part of a municipality (see Vuoristo 2002). Resorts are thus equated with villages which are not always regarded as official statistical areal units. Therefore, when studying statistically, the socio-economic characteristics and changes of geographical units smaller than municipalities, GIS (*Geographical Information Systems*) technology and georeferenced data, so called grid data, seem to be a respectable option.

Core–periphery models in tourism

In tourism research, the concepts of core and periphery were introduced in the 1960's and 1970's (see Christaller 1963; Lundgren 1975; Hills & Lundgren 1977). In the context of regional development, the concepts were applied, for example, in the classic models by Myrdal (1964), Friedmann (1966) and Hirschman (1970). Notwithstanding this, it was Prebisch who highlighted the concepts of core and periphery for the first time in 1949 (Lumijärvi 1983: 92).

Concerning developing countries and their international tourism, the dependence concept is often manifested (see Brohman 1996; Khah 1997; Scheyvens 2002; Telfer 2002). Frank's (1969) theory on the terms of the trade of the capitalist world system and the concept of surplus is usually mentioned in the background of the dependence concept. According to the theory, metropolises, cores, accumulate economic surplus from the surrounding satellites, a periphery, and they utilize that surplus for their own development. As a consequence of this, metropolises will strengthen their position in relation to satellites, since the satellites are not able to benefit from the overall growth of well-being. Simultaneously, satellites become increasingly dependent on metropolises. Frank states that a polarization process – on the one hand accumulation and on the other hand decline – emerges along with countries between regions. This kind of dependency theory can be discovered in the background of the classic core–periphery models in tourism (see Lundgren 1975; Hills & Lundgren 1977; Britton 1980, 1982). In this respect, it is noteworthy that Pearce (1995) has classified the traditional core–periphery models in tourism, into the group of structural models.

According to Friedmann (1966), a widely cited regional development theorist, the core and periphery concepts are considered to be relative in nature and therefore, they can be recognized on different geographical scales. This implies, for example, that centres, cores, can be found in rural areas, in a periphery, and these cores can be differentiated from the surrounding areas at a local level. Furthermore, Friedmann emphasizes the dynamic nature of the concepts of core and periphery: the position of regional units can vary, over time, between a core and a periphery. Thus, it is possible to have a development within a periphery. In other words, a periphery is not doomed to be a periphery forever. From the viewpoint of regional development, Botterill et al. (2000) summarize the differences between the concepts of core and periphery through the following variables: economy and population, information flows, the power relations of decision-making, as well as the infrastructure and service structure (Table 1). The distance to markets is one variable which is often added to the list: it is long in the case of a core, whereas, in the case of a periphery, it is short (Stuart et al. 2005: 236–237). Finally, Shields (1991)

Table 1. The characteristics of core and periphery (Botterill et al. 2000, Table 1.1).

Core	**Periphery**
High level of economic vitality and a diverse economic base	Low level of economic vitality and dependent on traditional industries
Metropolitan in character. Rising population through in-migration with a relative young age structure	More rural and remote – often with high scenic values. Population falling through out-migration, with an ageing structure
Innovative, pioneering and enjoys good information flows	Reliant on imported technologies and ideas, and suffers from poor information flows
Focus of major political, economic and social decisions	Remote from decision-making leading to a sense of alienation and lack of power
Good infrastructure and amenities	Poor infrastructure and amenities

points out that the concepts of core and periphery do not only have a dimension that is geographical, but also such that is social and cultural.

Christaller (1963) implies that tourism is a typical phenomenon for peripheral areas. However, it is widely known that at present, in absolute terms, the largest tourist flows can be found in cities (e.g. Page & Hall 2003). According to Christaller, the regions of origin are located mainly in cities, cores, and trips are mostly directed to rural areas, a periphery. Later in tourism research, attention has been paid to the core–periphery relationship between developed (core) and developing (periphery) countries at a global level, emphasizing the power relations of those two country groups (see Hills & Lundgren 1977; Britton 1980). Along with Britton's (1980) international level approach, the core–periphery relationship in tourism has also been noticed at the lower regional levels, as within countries (Brown 2006). In the case of Tobago and Barbuda, for example, Weaver (1998) expresses their position in the global tourism system by using the concept of "the peripheries of periphery". Those two islands are located – both in physical and social senses – in the periphery of the countries' main islands, Trinidad and Antigua. However, the main islands belong to a periphery from the perspective of the global tourism system, since they are developing countries.

Recently, a new, theoretical core–periphery model has been presented by Papatheodorou (2004). In his approach, Papatheodorou categorizes resorts into two groups, core and peripheral, based on the level of the development process in the context of western countries. The characteristics of core resorts include artificial attractions, diversified traffic services and a well-developed infrastructure, as well as a service structure. Furthermore, international tour operators, hotel chains and air companies operate in core resorts. Naturally, peripheral resorts represent the opposite ends of a continuum, compared to core ones. According to Papatheodorou, core and periphery are relative concepts and they can also be recognized at the different regional levels. In addition, he stresses, contrary to Britton (1980), the dynamic nature of resorts: over time, peripheral resorts are not doomed to belong to this category forever, and they may become core resorts.

As noted, the focus of the presented tourism core–periphery models is not to scrutinize regional development from a local level viewpoint, but the core–periphery relationship in the structural framework of tourism. Actually, regional development in itself is not local, because the phenomenon is recognized at the different regional levels. However, the message of the tourism core–periphery models can be interpreted from the perspective of regional development at a local level: the development of tourism either strengthens or creates the core–periphery relationship in a periphery, since tourist flows accumulate in enclave resorts. Along with tourist flows, investments focus on resorts, accelerating the concentration of enterprises, jobs and population. It has been argued that tourism and its development has an effect on the uneven distribution of capital in a geographical sense and thus, it contributes to increasing disparities with respect to regional development (Britton 1991). In other words, due to the accumulation process, the surrounding areas of resorts are incapable of benefiting from tourism.

Literature presents many examples in which the polarization process – the accumulation and de-

cline generated by tourism – has been discovered in regional development, both in developing countries and in the peripheral areas of western countries. In developing countries, this has been recognized at a local level, among others, in Indonesia (Hussey 1989; Shaw & Shaw 1999; Walpole & Goodwin 2000), Mexico (Brenner & Aguilar 2002; Brenner 2005) and Senegal (Diagne 2004). In the periphery of western countries, the polarization process has been noted at a sub-regional level in the Scottish Highlands (Getz 1981, 1986) and at a local level in the Spanish Pyrenees (Lasanta et al. 2007). For example, the study results of the Spanish Pyrenees have proved that in a municipality which has a ski resort or infrastructure enabling accessibility to a ski resort which is located in the vicinity of that municipality, the number of the population, as well as the change in the population structure and the economic dependency ratio have developed positively, compared to the other municipalities in the Pyrenees. Furthermore, the change of the economic structure of those ski resort municipalities has occurred quicker than in the other municipalities within the region. To sum up, all the above-mentioned examples underpin the core–periphery dichotomy which is generated by tourism. As an outcome of the tourism development, resorts have characteristics of cores and the surrounding area of those resorts resembles a periphery.

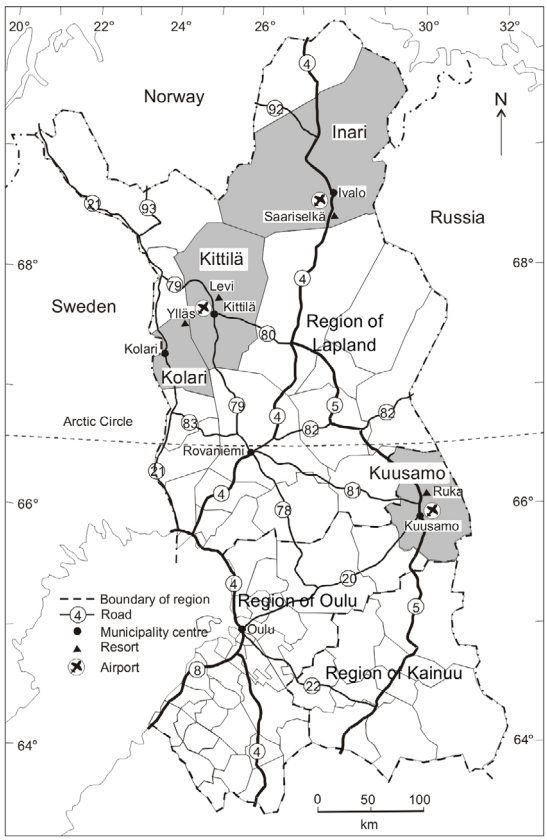

Fig. 1. The location of Levi, Ruka, Saariselkä and Ylläs in northern Finland (modified from Kauppila 2010, Fig. 2).

Large northern resorts, data and method

In the Finnish context, resorts are defined – in a geographical sense – as smaller regional units than municipalities and therefore, they constitute a functional centre of their own, within one municipality, or on the border of two or more municipalities (Vuoristo 2002). In other words, resorts are a part of their location municipality. Thus, resorts can be interpreted to resemble Prideaux's (2004) macro level view. Examples of these are the cases which are under study: Levi, Ruka, Saariselkä and Ylläs (Fig. 1).

The location municipalities of the resorts are Kittilä (Levi), Kuusamo (Ruka), Inari (Saariselkä) and Kolari (Ylläs). Along with a remote physical location, the municipalities are peripheral in both social and economic terms. This is supported by the fact that the number of their population, as well as their economic activity, is modest. For example, in 2009, the number of the population varied from less than 4 000 (Kolari) to over 16 000 (Kuusamo) and in 2008, the range of the number of jobs was from about 1 300 (Kolari) to almost 6 000 (Kuusamo) (FinlandCD 2011). It is noteworthy that the land area of the location municipalities is large and therefore, the population density of the municipalities is low. The age structure of the municipalities differs from Finland: in 2009, the average age of the location municipalities was a few years higher than in Finland in general (41.3 years) (FinlandCD 2011). With respect to the economic structure of the municipalities, in 2006, the proportion of the primary sector was higher than on an average in Finland. The range of the municipalities varied between 6% (Kittilä) and 9% (Inari), whereas, the average of Finland was 3% (Georeferenced data by Statistics Finland 2008a). Generally speaking, the following interpretation is rele-

vant: the location municipalities have, more or less, the characteristics of a periphery (see Botterill et al. 2000).

The development history of the resorts is long in the context of Finland. The first stage of the development process of the four largest resorts in Finland – Levi, Ruka, Saariselkä and Ylläs – can be found in the late 1800's and early 1900's (Kauppila 2004; Kauppila & Rusanen 2009). In referring to Butler's (1980) seminal destination life cycle model, the stage is interpreted as the exploring stage. Large-scale development began, at least, in the late 1960's and early 1970's and during that time, according to the destination life cycle model, the resorts moved onto the development stage (Kauppila 2004; Kauppila & Rusanen 2009). Recently, very extensive plans have been publicly manifested for the resorts for the next few years. At the present time, the largest resorts in northern Finland are target areas for hundreds of thousands of accommodation nights, several dozens of enterprises, hundreds of jobs, permanent residents and second homes (Table 2). Other bases for the selection of the resorts as the case studies have been manifested elsewhere (see Kauppila 2004, 2010; Kauppila & Rusanen 2009). It is noteworthy that in the present paper, the resort of Ylläs includes both the villages of Äkäslompolo and Ylläsjärvi in terms of enterprises, jobs and the permanent population (cf. Kauppila 2004; Kauppila & Rusanen 2009). The absolute distance between these two villages is only about ten kilometres and thus, they are considered to be one functional entity.

Referring to Prideaux's (2004) macro level view, resorts are regarded as local level regional units, but are not always paralleled with the lowest official statistical regional unit, i.e., the municipality. Along with the case of Finland, this has also been noticed in England by Agarwal and Brunt (2006). They have manifested this problem when attempting to provide comparable resort level data: resorts are usually considered to be district level regional units, although the geographical area of a "real" resort is just a part of a district. Hence, when the study area is smaller than a municipality in a geographical sense, GIS technology and georeferenced data, so called grid data, then seems to be a respectable option for the statistical socio-economic analysis of resorts. Georeferenced data is based on co-ordinates and in practice, residents, for example, can be defined as their residence, i.e. a property. In this study, the aggregation level of the grid data is, however, the 1 km x 1 km grid cell.

In literature, it has been recognized that the size of an areal unit influences the phenomena that is being investigated (see Oppershaw & Taylor 1979, 1981). This is used to call the *Maup*-problem (Modifiable area unit problem). If data is based on administrative regions (e.g. municipalities), it then ignores the internal differences of the region under study. This phenomenon is conceptualized as an ecological fallacy (see Martin 1991: 57–58). In the present study, the ecological fallacy concept is seen as a challenge when using municipality level data for describing the socio-economic regional development at the resort level. Municipality level data provides the impression of an equally distributed phenomenon within the region, although this kind of situation is known to be very exceptional in human geography in general. Instead of an equal distribution, the paper also assumes regional differences within the municipalities.

A model and the principles and challenges for using GIS and georeferenced data in the context of Finnish resorts have been presented extensively elsewhere (see Kauppila 2004; Kauppila & Ru-

Table 2. Basic information on Levi, Ruka, Saariselkä and Ylläs (Summer cottage statistics by Statistics Finland 2006; Georeferenced data by Statistics Finland 2008a; Statistics Finland 2008b; FinlandCD 2011).

	Levi	**Ruka**	**Saariselkä**	**Ylläs**
Location municipality/ town	Kittilä	Kuusamo	Inari	Kolari
Commercial accommodation nights (2007) (% international tourists)	688 717 (27)	841 129 (12)	377 012 (32)	419 026 (24)
Enterprises (2009)	146	63	64	126
Jobs (2006)	752	303	355	340
Permanent population (2007)	814	347	345	580
Second homes (2004)	1 092	1 036	205	591

sanen 2009). Briefly, when defining the resorts from the surrounding environment with grid cells, the following model was put into practice. Firstly, after checking the co-ordinates of the resorts from maps to outline the core areas of the destinations, the most populated grid cell (1 km x 1 km) was chosen as the so-called centre grid. The reason for the choice of the most populated grid cell as the centre grid was that the coverage of the job variable is not as complete as the population variable, due to the missing co-ordinates of some jobs (see Kauppila 2004; Häkkilä & Kauppila 2009a, 2009b, 2010; Kauppila & Rusanen 2009). It is noteworthy that the largest grid cell, in terms of the number of jobs, was located in all the cases either in the same grid cell as the most populated grid cell or alongside it. Actually, the concentration of jobs at the resort level is much higher than the population (see Häkkilä & Kauppila 2009a, 2009b). Secondly, the study area was expanded to cover the grid cells around the centre grid (7 km x 7 km), so the resorts encompass a land area of 49 km^2. Hence, the geographical area of each resort is equal and the resorts have the same opportunity for population and jobs coverage. In the case of Ylläs, the villages of Äkäslompolo and Ylläsjärvi were first treated as a resort of their own and the data of the destinations were integrated into one entity at a later stage. Generally, the applied model is highly suitable for outlining the core areas of the resorts.

The strengths of GIS and georeferenced data underlie the fact that resorts can be freely constituted, ignoring administrative boundaries. In principle, there are no limitations to the outlining. Georeferenced data includes a range of socio-economic variables stressing population, but variables related to economic activities are largely ignored. Unfortunately, there is no georeferenced data dealing with enterprises, for example, and in the case of enterprises, the data is based on postal code areas and the FinlandCD database. The postal code areas are the following: Levi (99130 Sirkka-Rauhala), Ruka (93825 Rukatunturi), Saariselkä (99830 Saariselkä) and Ylläs (95970 Äkäslompolo and 95980 Ylläsjärvi). It must be emphasized that the postal code areas do not exactly fit the geographical areas of the resorts under study, outlined by GIS and georeferenced data (see Kauppila 2004; Häkkilä & Kauppila 2009a). In this respect, the modifiable area unit problem still exists. The data for the research was provided by Statistics Finland.

Regional development: resorts and location municipalities

The development process of the resorts in the Finnish periphery has resulted, first and foremost, in an increase in the number of day-trippers and accommodated tourists. As a consequence, this has led to a growth in the number of enterprises, jobs and the permanent population over the last few decades (Table 3). This process can be noticed, in particular, at Levi and Ylläs. It has to be borne in mind that in the case of Ylläs, in 1993, the number of enterprises only includes the village of Äkäslompolo, since there was no enterprise data available concerning the village of Ylläsjärvi. In absolute terms, at Levi, for example, the number of enterprises has increased to almost 120, jobs to over 700 and the permanent population of nearly

Table 3. Enterprises, jobs and the permanent population of Levi, Ruka, Saariselkä and Ylläs, in relation to their location municipalities. The relative numbers (%) indicate the proportion of the resorts of their location municipalities. The absolute numbers of the resorts are in parenthesis (Georeferenced data by Statistics Finland 1970, 1980, 2008a; FinlandCD 1993, 2011).

	Enterprises		Jobs		Permanent population	
Resort	**1993**	**2009**	**1980**	**2006**	**1970**	**2007**
Levi	14 % (36)	34 % (146)	3 % (37)	34 % (752)	5 % (365)	14 % (814)
Ruka	4 % (21)	7 % (63)	3 % (126)	5 % (303)	1 % (175)	2 % (347)
Saariselkä	12 % (36)	18 % (64)	5 % (111)	15 % (355)	0 % (28)	5 % (345)
Ylläs	16 % (33)	42 % (126)	5 % (58)	32 % (340)	4 % (220)	15 % (580)

450. The development process of Ruka and Saariselkä has been similar to Levi and Ylläs, but the intensity seems to be slightly lower. All in all, the development process of the resorts has progressed in absolute terms.

In 1980–2006, the total increase in the jobs of the resorts was over 1 400. Respectively, from 1970 to 2007, the total number of the permanent population increased by nearly 1 300 people. It is noteworthy that during the study period, the development of the number of jobs in the municipalities of Inari and Kolari would have been negative without the positive development trend of Saariselkä and Ylläs. Furthermore, in 1980–2006, in the case of Kittilä, almost 80% of all the jobs were created at Levi. From 1970 to 2007, all of the location municipalities have had a decreasing trend in terms of their permanent population. For example, the municipality of Kolari has lost almost a fourth of all its population and the municipality of Kittilä, about a fifth in the study period (Georeferenced data by Statistics Finland 1970, 1980, 2008a). As noted earlier, all of the resorts under study have had an increasing population trend. It must be emphasized that if the resort data had included "non-statistical" seasonal residents – workers, telecommuters and second homers – the population would have been substantially greater.

From the perspective of the location municipalities, the importance of the resorts has strengthened in regional development (see Table 3). This relative viewpoint can be demonstrated best in the cases of Levi and Ylläs. For example, the proportion of jobs at the Levi and Ylläs resorts was a third of all the jobs in the municipalities of Kittilä and Kolari in 2006, but it was only a few percent in 1980. This tendency is similar in all the cases, but the intensity varies. Basically, the relative changes of enterprises and the permanent population at the resorts follow the development trend of jobs. To conclude, the resorts under study have increased their value within their location municipalities, both in absolute and relative terms from the standpoint of regional development.

At a municipality level, the relative changes have been very rapid in those areas with a strong positive development process of the resort associated with a small-sized regional economy in terms of enterprises, jobs and permanent population. This is not only due to the fact that the development process of the resorts themselves has been extremely positive during the last decades, but simultaneously, the other parts of the municipalities, except the municipality centres, have declined (see Kauppila 2004). Therefore, the regional development of the municipalities resembles the structure of two growth poles at the local level. It is obvious that the role of the resorts within the location municipalities in regional development will strengthen in the future. Actually, the current regional development plan of Lapland sketches the regional structure of the whole of Lapland until 2030 (Lappi – pohjoisen… 2009). Referring to the plan, the regional structure of the municipalities will be concentrated in the tourism development corridors between the municipality centres and the resorts. Of course, the role and importance of the resorts in regional development will depend on the demand of tourism in the future. If the tourism demand will not increase at the resorts, then it is obvious that the role of the resorts in regional development within the location municipalities will not strengthen either. On the other hand, the development process of the municipality centre and other centres has an influence on the entire regional structure of the municipalities.

In the cases under study, the polarization process of regional development seems to be pronounced in the municipalities of Kittilä and Kolari. The absolute size of Ruka is about the same compared to Levi, Saariselkä and Ylläs, with respect to regional development indicators, but the size of the regional economy of the town of Kuusamo is substantially larger than the other location municipalities under study. For example, in 2009, the number of the population in Kuusamo (16 669 inhabitants) was almost threefold in comparison with Inari (6 863) and Kittilä (6 115) and more than fourfold in terms of Kolari (3 854) (FinlandCD 2011). In terms of enterprises and jobs, the ratio between the municipalities is in line with the number of the population. Therefore, the relative importance of Ruka, within the town of Kuusamo, is lower. In other words, Kuusamo is less dependent on Ruka than, for example, Kittilä is on Levi or Kolari is on Ylläs. Nevertheless, from the perspective of regional development, the relative importance of the resorts within their location municipalities has increased in all the cases.

Along with the quantity indicators, the age structure of the resorts differs nowadays from the municipalities. In 1970, at the resorts, the proportion of the young age group (less than 16 years) varied between 17% (Saariselkä) and 34% (Ylläs), whereas in the municipalities, the range was from 32% (Kittilä) to 38% (Kuusamo) (Georeferenced

data by Statistics Finland 1970). Hence, in the case of the resorts, the proportion of the age group was lower than in their own location municipality. In 2007, the corresponding figures of the resorts varied from 19% (Saariselkä) to 25% (Levi and Ruka) and in the location municipalities, they were between 18% (Kolari) and 23% (Kuusamo) (Georeferenced data by Statistics Finland 2008a). Contrary to 1970, at the resorts under study, the proportion of the age group was higher than in their own location municipality. It has to be borne in mind that in 2007, the youngest age group was defined to be less than 18 years.

In terms of retired people (more than 64 years old), in 1970, there were no substantial differences between the resorts and the municipalities, but in 2007, at the resorts, their proportion was less than 10%, whereas in the case of municipalities, the range varied from 17% (Inari) to 20% (Kolari) (Georeferenced data by Statistics Finland 1970, 2008a). Therefore, in the resort cases under study, the proportion of retired people was lower than in their own location municipality at the present time.

In conclusion, the age structure of the resorts has changed over time, and nowadays, the destinations have a healthier age structure compared to the location municipalities in relative terms. Furthermore, the unemployment rate of the resorts has remained notably lower than the average of the location municipalities during the last decades (FinlandCD1993, 1998, 2002, 2006, 2011).

The service and enterprise structure of the resorts is diversified over time. The standard industrial classification by Statistics Finland changed in 2008 and it is therefore not possible to completely compare the diversification. In 2009, along with accommodation, restaurant and programme services, a large number of other businesses, such as local grocery stores, retail trades, construction, transportation and real estate firms, are situated within the resorts (FinlandCD 2011). Furthermore, some public services – nursery, fire station, comprehensive school (not at Saariselkä) and church (not at Ruka) – can be found at the destinations (Kauppila 2008). Bearing in mind that there are only a few hundred people living permanently at the resort, without tourism and tourists, the service and enterprise structure of the destinations would be more one-sided.

Along with the age structure, the economic structure of the resorts differs nowadays from the municipalities. In 1970, at the resorts, the proportion of the primary sector varied between 11% (Saariselkä) to 56% (Ylläs), whereas in the case of municipalities, the range was from 29% (Inari) to 50% (Kittilä) (Georeferenced data by Statistics Finland 1970). Thus, in the resort cases, the proportion of the primary sector was about the same or even higher (Ylläs) than in their own location municipality. In 2006, the corresponding figures of the resorts were from 0.3% (Levi) to 3% (Ruka) and in the case of municipalities, the range varied between 6% (Kittilä) and 9% (Inari) (Georeferenced data by Statistics Finland 2008a). Hence, the proportion of the primary sector was lower than in their own location municipality.

In terms of the tertiary sector, in 1970, in the resort cases, it varied between 28% (Ylläs) and 89% (Saariselkä) and in the municipalities, the range was from 35% (Kittilä and Kolari) to 53% (Inari) (Georeferenced data by Statistics Finland 1970). At all the resorts, except Saariselkä, the proportion of the tertiary sector was about the same as in their own location municipality. However, in the case of the Ylläs resort, it was even lower than in the municipality of Kolari. In 2006, the corresponding figures of the resorts were between 86% (Ruka) and 96% (Saariselkä) and in the municipalities, the range was from 74% (Kuusamo) to 84% (Kittilä) (Georeferenced data by Statistics Finland 2008a). To conclude, in the case of the resorts, the proportion of the tertiary sector was substantially higher than in their own location municipality.

Generally speaking, the overall economic transition from the primary sector to the tertiary sector has been very rapid at the resorts, compared to their location municipalities. In practice, concerning the resorts, agriculture and forestry has been substituted for the tourism industry over time. At the resorts, the secondary sector has never been a great contributor to the economy. In terms of Saariselkä, the resort was found for a tourism purpose and had no traditional settlement or industries before the tourism era. This accounts for the low primary sector and high tertiary sector rates which were already present in 1970.

To sum up, both from the quantity and structural perspectives, the aforementioned regional development process is exceptional for peripheral rural areas. Generally speaking, those areas suffer from economic decline due to economic restructuring. A decrease in the number of enterprises, jobs and the permanent population, as well as unemployment, out-migration and an ageing population are considered to be indicators of this. At present, the

core–periphery dichotomy can be found within the municipalities. The polarization process is generated by tourism development and as a consequence of this, the resorts tend to have resembled the characteristics of cores and the surrounding area is a periphery (see Botterill et al. 2000).

Conclusions

The aim of the study was to conceptualize the regional development process of resorts in relation to their location municipalities at a local level in Finland. The number and structure of enterprises, jobs and permanent population were applied as the indicators of regional development. The data for the research was provided by Statistics Finland and it was analyzed by using GIS technology and georeferenced data.

The study results proved that the regional development processes of the four largest resorts – Levi, Ruka, Saariselkä and Ylläs – in northern Finland have been very positive within their location municipalities. Thus, based on the findings of the paper, the resorts more resemble the characteristics of cores than a periphery in terms of the development of the economy and population and therefore, they are defined as cores. More precisely, the resorts are considered to be "cores in a northern periphery". It is widely known that over the last decades, a great deal of public and private capital has been invested in the largest resorts in northern Finland. According to the results of this research, the outcome of the investments has been successful from the viewpoint of the resorts, with respect to the number and structure of the enterprises, jobs and permanent population. Utilizing the core–periphery terminology, the surrounding area of those cores can be conceptualized as a periphery, in other words "a periphery in a northern periphery". As a consequence, the polarization process within the municipalities is very strong at the moment, but there are, however, some differences in the rate of the changes between the municipalities. Basically, the polarization within the location municipalities in social and economic terms seems to be distinct with the strong positive development process of the resort associated with a small-sized regional economy in terms of the enterprises, jobs and permanent population. To conclude, the concepts of core and periphery, generated by tourism, can also be found at a local level in the Finnish periphery. Hence, the study results underpin the fact that has been recognized both in developing countries (e.g. Hussey 1989; Shaw & Shaw 1999; Walpole & Goodwin 2000; Brenner & Aguilar 2002; Diagne 2004; Brenner 2005) and in the peripheral areas of western countries (e.g. Getz 1981, 1986; Lasanta et al. 2007).

From the theoretical perspective, the study associates the core–periphery relationship with the development process of resorts, focusing on two important variables in terms of regional development, i.e. economy and population. To put it briefly, when resorts progress over time, from a local level recreation centre to a regional, national and finally even an international level resort, the changes in the number and structure of the enterprises, jobs and population are positive compared to the surrounding area of those resorts. Simultaneously, due to tourism, development resorts are moving on from peripheries to cores from the viewpoint of regional development. Thus, the concepts of the core and periphery are dynamic in nature as, for example, Friedmann (1966) and Papatheodorou (2004) have manifested. The dynamic nature of destinations implies that the changes in the roles of regional development over time – from a periphery to a core – are associated with the destination life cycle model by Butler (1980). During the early stages of the model, resorts resemble the characteristics of a periphery and in the latter stages, apart from an overall decline of the regional economy, they can be considered to be cores (see Kauppila 2004, 2006).

As noted earlier, in Finland, the lowest official statistical regional unit is the municipality, but GIS technology and georeferenced data enable the study of non-administrative geographical units that are smaller than municipalities statistically. Without GIS and georeferenced data, the present research design would be challenging, even impossible to realize. The strength of using GIS is that it provides an opportunity to outline and analyze resorts, whilst ignoring administrative boundaries. It is noteworthy to remark that georeferenced data, so called grid data, is quite rare world-wide. There are, however, some examples of the utilization of grid data in the context of Swedish resorts from the viewpoint of second home tourism (see Müller 2005). Although georeferenced data includes a wide range of socio-economic variables, it would be relevant to extend the database, addressing enterprises and economic activity variables generally. This would provide a new and diversified approach to study the nexus

of the tourism development of resorts and regional development.

Basically, resorts as cores are key nodes in tourism-oriented regional development, because they are considered to be locations for the accumulation of tourists and the tourism industry. As a result of this, the positive tourism development of resorts leads to, among others, a growth in the number of enterprises and jobs. From the viewpoint of the regional development of peripheral rural areas, the main challenge is to extend the positive socio-economic impacts of resorts to a wider geographical area. In practice, this means collaboration between resorts, cores, and the surrounding area, a periphery, both within the tourism industry and between the tourism industry and other local industries (see Kauppila et al. 2009). Actually, the basic idea of the above-mentioned collaboration is to integrate resorts and the surrounding area into one functional entity in social and economic terms, in order to decrease regional disparities between cores and a periphery at the local level. As a consequence, tourism can be used more effectively as a tool for regional development, based on the larger multiplicative effects on the area and smaller leakages from that area.

Recently, Lacher and Nepal (2010) have demonstrated in the case of three villages in northern Thailand that it is possible to utilize tourism and the tourism industry successfully in regional development at a local level in a periphery. They emphasize a strategy to increase the positive socio-economic impacts of tourism. Using that strategy, on the one hand, leakages can be reduced, and on the other hand, it is possible to increase local economic development, distribute tourism income throughout the region and convert more local residents into stakeholders in the tourism industry. Generally speaking, Lacher and Nepal highlight that the more the supply side of tourism in peripheral areas is dependent on cores outside the regions of destination, the more leakages there are from the areas. In other words, the more linkages are developed within the industries in a periphery, the larger the economic benefit for the area. As noted earlier, based on the links between local industries within a region, a periphery can evolve a core over time.

REFERENCES

Agarwal S & Brunt P 2006. Social exclusion and England seaside resorts. *Tourism Management* 27: 4, 654–670.

Botterill D, Owen RE, Emanuel L, Foster N, Gale T, Nelson C & Selby M 2000. Perceptions from periphery: the experience of Wales. In Brown F & Hall D (eds). *Tourism in peripheral areas: case studies,* 7–38. Channel View Publications, Clevedon.

Brenner L 2005. State-planned tourism destinations: the case of Huatulco, Mexico. *Tourism Geographies* 7: 2, 138–164.

Brenner L & Aguilar AG 2002. Luxury tourism and regional development in Mexico. *The Professional Geographer* 54: 4, 500–520.

Britton SG 1980. A conceptual model of tourism in a peripheral economy. In Pearce DG (ed). *Tourism in the South Pacific: the contribution of research to development and planning,* 1–12. University of Canterbury, NZ National Commission for Unesco/ Department of Geography, NZ MAB Report no. 6.

Britton SG 1982. The political economy of tourism in the Third World. *Annals of Tourism Research* 9: 3, 331–358.

Britton S 1991. Tourism, capital, and place: towards a critical geography. *Environment and Planning* D 9: 4, 451–478.

Brohman J 1996. New directions in tourism for Third World development. *Annals of Tourism Research* 23: 1, 48–70.

Brown F 2006. Dynamics of core and periphery in tourism: changing yet staying the same! *Tourism Recreation Research* 31: 1, 79–81.

Butler RW 1980. The concept of a tourist area cycle of evolution: implications for management of resources. *The Canadian Geographer* 24: 1, 5–12.

Butler RW, Hall CM & Jenkins J (eds) 1998. *Tourism and recreation in rural areas.* John Wiley & Sons, Chichester.

Christaller W 1963. Some considerations of tourism location in Europe: the peripheral regions – underdeveloped countries – recreation areas. *Regional Science Association; Papers XII, Lund Congress 1963,* 95–105.

Diagne AK 2004. Tourism development and its impacts in the Senegalese Petite Côte: a geographical case study in centre–periphery relations. *Tourism Geographies* 6: 4, 472–492.

FinlandCD 1993. Regional database. Statistics Finland, Helsinki.

FinlandCD 1998. Regional database. Statistics Finland, Helsinki.

FinlandCD 2002. Regional database. Statistics Finland, Helsinki.

FinlandCD 2006. Regional database. Statistics Finland, Helsinki.

FinlandCD 2011. Regional database. Statistics Finland, Helsinki.

Frank AG 1969. *Capitalism and underdevelopment in Latin America. Historical studies of Chile and Brazil.* Monthly Review Press, London.

Friedmann J 1966. *Regional development policy: a case study of Venezuela.* M.I.T. Press, Cambridge, Massachusetts.

Getz D 1981. Tourism and rural settlement policy. *Scottish Geographical Magazine* 97: 3, 158–168.

Getz D 1986. Tourism and population change: long-term impacts of tourism in the Badenoch and Strathspey District of the Scottish Highlands. *Scottish Geographical Magazine* 102: 2, 113–126.

Hall CM, Müller DK & Saarinen J 2009. *Nordic tourism: cases and issues.* Channel View Publications, Clevedon.

Hills TL & Lundgren J 1977. The impact of tourism in the Caribbean: a methodological study. *Annals of Tourism Research* 4: 5, 248–267.

Hirschman AO 1970. *The Strategy of economic development.* 14th ed. Yale University Press, New Haven.

Hussey A 1989. Tourism in a Balinese village. *The Geographical Review* 79: 3, 311–325.

Häkkilä H & Kauppila P 2009a. Matkailukeskusten määrittäminen paikkatietotekniikalla ja kehityksen seurantaan soveltuvat paikkatietoaineistot: esimerkkinä Hiekkasärkät, Ruka, Syöte ja Levi. *Pohjois-Pohjanmaan liitto, julkaisu* B: 56.

Häkkilä H & Kauppila P 2009b. Rukan ja Vuokatin matkailukeskusten sosioekonomiset piirteet paikkatietonäkökulmasta. *Oulun yliopisto, Lönnrot-instituutin julkaisuja* n:o 13.

Häkkilä H & Kauppila P 2010. Kilpisjärven matkailukeskuksen sosioekonominen rakenne ja kehityksen seuranta: paikkatietonäkökulma. *Helsingin yliopisto, Kilpisjärven biologinen asema, Kilpisjärvi Notes* 23.

Kauppila P 2004. Matkailukeskusten kehitysprosessi ja rooli aluekehityksessä paikallistasolla: esimerkkeinä Levi, Ruka, Saariselkä ja Ylläs. *Nordia Geographical Publications* 33: 1.

Kauppila P 2006. Matkailukeskusten muuttuvat toiminnot tilassa ja ajassa: teoreettinen näkökulma. *Matkailututkimus* 2: 1, 19–40.

Kauppila P 2008. Pohjois-Suomen suurten matkailukeskusten monet toiminnot: asukkaiden ja työllisten näkökulma. *Terra* 120: 1, 22–29.

Kauppila P 2010. Resorts, second home owners and distance: a case study in northern Finland. *Fennia* 188: 2, 163–178.

Kauppila P, Leinonen R & Saarinen J 2009. Sustainable tourism planning and regional development in peripheries: a Nordic view. *Scandinavian Journal of Hospitality and Tourism* 9: 4, 424–435.

Kauppila P & Rusanen J 2009. A grid cell viewpoint to resorts: case studies in northern Finland. *Scandinavian Journal of Hospitality of Tourism* 9: 1, 1–21.

Khan MM 1997. Tourism development and dependency theory: mass tourism vs. ecotourism. *Annals of Tourism Research* 24: 4, 988–991.

Lacher RG & Nepal SK 2010. From leakages to linkages: local-level strategies for capturing tourism revenue in northern Thailand. *Tourism Geographies* 12: 1, 77–99.

Lappi – pohjoisen luova menestyjä 2009. Lapin maakuntasuunnitelma 2030. *<http://www.lapinliitto.fi/c/document_library/get_file?folderId=53982&name=DLFE-3226.pdf>* 29.3.2011.

Lasanta T, Laguna M & Vicente-Serrano SM 2007. Do tourism-based ski resorts contribute to the homogeneous development of the Mediterranean mountains? A case study in the Central Spanish Pyrenees. *Tourism Management* 28: 5, 1326–1339.

Lumijärvi T 1983. Aluetaloudelliset kehitysteoriat, erityisesti keskus–periferia-mallit aluepolitiikan tulkitsijoina. *Tampereen yliopisto, aluetiede, tutkimuksia, sarja* B 31/83.

Lundgren JOJ 1975. Tourist penetration/the tourist product/entrepreneurial response. *Tourism as a factor in national and regional development, Occasional Paper* 4, 60–70.

Martin D 1991. *Geographical information systems and their socio-economic applications.* Routledge, London.

Myrdal G 1964. *Economic theory and under-developed regions.* Gerald Duckworth, London.

Müller DK 2005. Second home tourism in the Swedish mountain range. In Hall CM & Boyd S (eds). *Nature-based tourism in peripheral areas. Development or disaster?*, 133–148. Channel View Publications, Clevedon.

Müller DK & Jansson B (eds) 2007. *Tourism in peripheries: perspectives from the Far North and South.* CAB International, Wallingford.

Oppenshaw S & Taylor PJ 1979. A million or so correlation coefficients: three experiments on the modifiable areal unit problem. In Wrigley N (ed). *Statistical application in the spatial sciences*, 127–144. Pion, London.

Oppenshaw S & Taylor PJ 1981. The modifiable areal unit problem. In Wrigley N & Bennett RJ (eds). *Quantitative geography: a British view*, 60–70. Routledge & Kegan Paul, London.

Page SJ & Hall CM 2003. *Managing urban tourism.* Pearson, Harlow.

Papatheodorou A 2004. Exploring the evolution of tourism resorts. *Annals of Tourism Research* 31: 1, 219–237.

Pearce D 1995. *Tourism today: a geographical analysis.* 2nd ed. Longman, Harlow.

Prideaux B 2004. The resort development spectrum: the case of the Gold Coast, Australia. *Tourism Geographies* 6: 1, 26–58.

Saarinen J 2007. Contradictions of rural tourism initiatives in rural development contexts: Finnish rural tourism strategy case study. *Current Issues in Tourism* 10: 1, 96–105.

Scheyvens R 2002. *Tourism for development. Empowering communities.* Pearson, Harlow.

Shaw BJ & Shaw G 1999. "Sun, sand and sales": enclave tourism and local entrepreneurship in Indonesia. *Current Issues in Tourism* 2: 1, 68–81.
Shields R 1991. *Places on the margin: alternative geographies of modernity*. Routledge, London.
Statistics Finland 1970. Georeferenced data, unpublished.
Statistics Finland 1980. Georeferenced data, unpublished.
Statistics Finland 2006. Summer cottage statistics, unpublished.
Statistics Finland 2008a. Georeferenced data, unpublished.
Statistics Finland 2008b. *Transport and tourism*. Tourism statistics in 2008. Statistics Finland, Helsinki.
Stuart P, Pearce D & Weaver A 2005. Tourism distribution channels in peripheral regions: the case of Southland, New Zealand. *Tourism Geographies* 7: 3, 235–256.
Suomen matkailustrategia 2020 2010. 4 hyvää syytä edistää matkailutoimialojen kehitystä. <*http://www.tem.fi/files/27141/Matkailustrategia_020610.pdf*> 29.3.2011.
Telfer DJ 2002. The evolution of tourism and development theory. In Sharpley R & Telfer DJ (eds). *Tourism and development. Concepts and issues*, 112–148. Channel View Publications, Clevedon.
Vuoristo K-V 2002. Regional and structural patterns of tourism in Finland. *Fennia* 180: 1–2, 251–259.
Walpole MJ & Goodwin HJ 2000. Local economic impacts of dragon tourism in Indonesia. *Annals of Tourism Research* 27: 3, 559–576.
Weaver DB 1998. Peripheries of the periphery: tourism in Tobago and Barbuda. *Annals of Tourism Research* 25: 2, 292–313.