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The impact of second home tourism on local economic development in rural areas in Norway

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Abstract: Over recent decades, rural–urban migration and a decrease in wealth have been major challenges faced by European rural areas. Maintaining urban and rural settlements throughout the country has been an important aim of Norwegian regional politics. This paper assesses the impact of second home tourism on local economic development in rural municipalities in Norway. The study is based on data collected as part of an ongoing research project initiated in 2002. Having developed and tested a model consisting of socio-economic factors and factors associated with the second home as such, the authors examine how and to what extent these factors explain the impact of second home tourism on local economic growth. They find that the size and standard of the recreational home are important factors in explaining variations in annual consumption by second home owners, *and* more so in rural communities with a broad and well-structured trading activity than in areas with a weaker trading structure. It appears that urban recreational tourism based on second homes of high standard offers the best potential for sustainable local

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rural economic growth. Based on their findings, the authors also discuss possible local government strategies to achieve economic growth through second home tourism.

Keywords: second homes; sustainability; community economic development; local economic impact; regional economic impact; Norway

Over recent decades, rural–urban migration and a decrease in wealth have been major challenges faced by European rural areas (Bollman and Bryden, 1997; Terluin, 2003). Business activity in rural areas has historically been associated with the production of food and fibre. Primary industry continues to be an important economic factor and a provider of employment in many areas, but as a general trend, the importance of fibre production in the rural Western world's economy seems to be declining (Koster and Randall, 2005).

These tendencies are also evident in Norway, where agricultural production and forestry are less competitive salary wise in comparison with other industries (Andersen *et al*, 2010). As a result, farmers are forced to seek other sources of income, either in activities related to farming, for instance tourism, or in trades unrelated to agriculture and forestry, in order to maintain their level of income.

When international commitments, such as Agenda 21 (United Nations, 1993), bring about increased land protection in rural areas, the prospects for agricultural production and forestry are also affected. A lack of concern for how people who live on, and live off, protected land are supposed to provide for themselves (Peters, 2002), has led to extensive conflicts between the local population and the environmental regulation authorities in many countries (Hammer, 2007; Brockington *et al*, 2008). A continuous reduction in subsidies to the agricultural industry (Andersen *et al*, 2010), combined with increased land protection, may have an additional negative impact on the rural economy in Norway.

During the 1980s, the term 'sustainability', as it relates to economic development, became well known through the work of the Brundtland Commission, which defined it as 'development that meets the needs of current generations without compromising the ability of future generations to meet their own needs' (World Commission on Environment and Development, 1987).

Initially the emphasis was on the *ecological* perspective. In 2002 the negotiations at the United Nations (UN) lead to a shift in focus towards *social* and *economic* sustainability, as equally important factors for development (Drexhage and Murphy, 2010). Swarbrooke (1999) relates these three factors to tourism and maintains that they are just as important in achieving sustainable development within that field, and that the elements are mutually dependent.

Studies show that a focus on tourism may work as a possible strategy for stimulating local economic development (Andereck and Vogt, 2000; Page and Hall, 2003; Draper *et al*, 2011). In this context, rural economy could be reinforced by farmers investing in second home tourism as a trade in addition

to ordinary farming. This could then further lead to higher employment rates and an increase in the population in rural municipalities.

Local economic development has been an area of research for several decades (Lösch, 1954; Fujita *et al*, 1999; Terluin, 2003; Morgan, 2010). The objective of the research work has been either to create models for regional development, or to develop strategies that can contribute to increased employment and economic growth. The literature usually distinguishes between local economic development (LED) and community economic development (CED).

Bryant (1992) considers CED as a form of LED for describing both the economic angle as well as the community-based angle of rural development. CED can, when viewed from a tourism perspective, be understood as 'soft-tourism' (Krippendorf, 1987). These are models for regional development based on small enterprises owned and run by locals, and as a rule, founded on the given competitive advantages of the region. There is usually a strong connection between tourism and CED in areas with amenity rich rural landscapes (Koster and Randall, 2005).

A possible approach for rural municipalities is to invest in second home tourism as a CED strategy. It would be crucial for both farmers/landowners and local authorities in municipalities wishing to invest in second home tourism to know how to organize and plan in order to achieve local economic sustainability. The municipal government is the executive power with respect to land zone planning for recreational homes in Norway. Local authorities can, for instance, specify requirements for area layout, building standards and infrastructure in relation to zoning plans for second home areas.

So far, our work has revealed that no existing studies have attempted to determine which factors influence the second home owner's contribution to the local formation of values. Is the second home owner's annual consumption determined by socio-economic factors only, or is it determined also by factors related to the second home building itself? It would be important for local executive regulation authorities, landowners and local tradesmen to have the knowledge of how these factors are determining local economic sustainability when adjusting their offers to users of second homes. Local authorities, landowners and local tradesmen could then cooperate in adapting CED strategies for upholding settling and employment, both when putting to use new areas for building recreational homes, as well as when making changes in the zoning plans for existing recreational home areas.

The objective of our research is thus to determine the following:

- Which factors are important for the seond home owner's influence on local trade and hence local economic sustainability.
- Which local community-based strategies should be applied by the local government to attain local formation of value associated with second home tourism.

The paper is divided into three sections. First, we review the existing research on the economic impact of second homes. Second, we describe our chosen case and the methodology applied. Finally, we present the results and consider how municipalities can use these findings in creating strategies for local economic growth from a sustainability perspective.

Theory

The revitalization of research related to second homes was initiated in the 1970s (Hall and Müller, 2004). During the last decade the focus has been mainly on economic, social and environmental issues (Müller *et al*, 2004; Gallent *et al*, 2005; Roskey, 2011). Issues within these three areas are often in conflict with each other. The development of new second home areas may lead to an increase in economic sustainability, but at the same time to reduced ecological sustainability. As an example, the building of new recreational homes and the maintenance of a wild reindeer population of a certain minimum size constitute such a conflict.

Research on local formation of value and second home tourism during the last few years has been primarily linked to two different perspectives. One perspective considers recreational homes as a source of tax revenues for the municipality, either indirectly as the result of an increase in sales for local businesses and thus an increase in employment, or directly through taxes imposed on the second home property (Deller *et al*, 1997; Müller, 1999; Müller *et al*, 2004; Gallent *et al*, 2005).

The second perspective focuses on the undesirable consequences for the local community as a result of second home development. As an example, second home development could lead to an increase in property prices in attractive zones, followed by social consequences for the local population in terms of more expensive housing and ensuing problems for locals when they are in the market for buying new homes (Hoggart and Buller, 1995; Gallent and Tewdwr-Jones, 2000; Seong-Hoon Cho *et al*, 2003; Gallent *et al*, 2005; Dedam and Zwick, 2006; Marjavaara and Müller, 2007).

Hoogendoorn and Visser (2010) categorize these two perspectives as a neo-liberal and a Marxist approach to the research field, respectively.

The main purpose of most of the relevant research work in the Nordic countries has been to investigate the impact of second homes on the rural economy (Bohlin, 1982; Ericsson, 1986; Ericsson and Vonlanthen, 1986; Flognfeldt, 1994; Flognfeldt, 1996; Müller, 1999; Velvin *et al*, 2000; Velvin, 2003, Ericsson and Grefsrud, 2005; Velvin, 2006). These studies have attempted mainly to estimate the economic consequences for municipalities and regions. However, they do not render specifically which factors are important for the local formation of value, or actions that municipalities may take as part of a CED strategy to stimulate local economic growth.

In addition to the above studies, some non-Nordic studies have been carried out. For the most part, these studies have had the same objectives as the Nordic studies. The first were based chiefly on investigations carried out in the Michigan area in the USA (Marcouiller *et al*, 1996; Preissing *et al*, 1996; Deller *et al*, 1997; Stynes *et al*, 1997). For studies in Ireland, the focus has been only on expenditure behaviour (Mottiar, 2006). In South Africa, focus has been both on expenditure behaviour and on the use of manpower in connection with second homes. In this South African study second home tourism is placed in a LED context (Hoogendoorn and Visser, 2010).

Other studies have looked at second home tourism without relating the usage to economic factors or to the potential for economic development in the municipality. Some of these have discussed to what extent the second home

user's relationship to nature can explain the amount of time spent at the second home and the consumption of recreational activities. For example, the studies distinguish typical recreational activities such as hiking and skiing, from that of just wanting to be in contact with nature or simply enjoy the scenic view (Kaltenborn *et al*, 2005; Sievänen *et al*, 2007; Larsen, 2010). Sievänen *et al* (2007) use socio-economic factors to categorize second home users as *non-users* or *active users* in the light of the social lifestyle of the second home owner.

In Denmark, Hjalager *et al* (2009) have conducted a survey to examine the general aspects of the ownership of second homes. They also discuss different perspectives in relation to the planning of areas set aside for second homes – such as an expected change in the value of second homes, welfare policy and the impact of second homes on tourism policy (Hjalager *et al*, 2009).

Larsen (2010) has carried out a qualitative study on second homes in Denmark in which he examines the behaviour of both owners and tenants. The study points to three factors that are important for the motivation of users of second homes: spending time away from home, relaxation and social gathering, and spending time outdoors/'back to nature'.

Case study and methodology

Our data were collected from second home owners in the municipalities of Sigdal, Hol and Rollag in Buskerud Municipality County, Norway through an ongoing research project initiated in 2002. These municipalities are considered typical of inland municipalities in rural areas in the south eastern part of Norway. They are small in terms of the number of inhabitants. However, they all have large areas of outlying fields and wilderness that have offered and still offer opportunities for the tourist industry. In these municipalities, problems related to the use and protection of land, have influenced the local political processes. In all three municipalities the inhabitants' source of income is based mainly on industries such as agriculture, forestry and tourism, as well as employment linked to public municipal services. The municipalities have had and have manufacturing industry, which, however, in later years has experienced moderate to severe cutbacks.

In order to investigate the opportunities for developing tourism in a sustainable context based on recreational homes, these three municipalities were also chosen in light of the following criteria: (i) travel distance from the permanent residence to the second home; (ii) proximity to unspoiled mountain areas/protected land zones; (iii) difference between the municipalities in terms of the variety in available shops, as documented by available information from the Norwegian Census Bureau (Statistics Norway, 2010); (iv) the local government's planning and coordination through passive/active business development in the tourism sector, especially in second home tourism.

Data were collected by means of a mail questionnaire. From the garbage disposal registry for second home owners in the three municipalities, we drew a random sample of 3,753 based on the criterion that the owner's permanent address had to be in Norway. A total of 2,210 questionnaires were returned – a response rate of 58.9%. By and large the responses were distributed equally

between the three municipalities. As one of the municipalities in the study has decided to introduce property taxation, all our data dates back to before 2006, in order to avoid the moderating effect of such taxation.

The mail questionnaire was divided into four parts. Part 1 dealt with socio-demographic factors and second home particulars. Part 2 addressed details related to the usage of second homes – the number of day trips, weekend trips and holiday trips to the second home, and the number of nights spent in the second home. We asked that the numbers should include the usage by the owner himself or herself and by family members or others travelling with the owner within a 12-month cycle (data collection period). Part 3 focused on (i) spending habits and on the amount of money spent, and (ii) on what was purchased in terms of groceries, products used for maintenance, and products used for renovation/redecorating. The questions in Part 4 addressed matters related to transportation to and from the second home. The study design was based on similar investigations carried out in Norway (Ericsson, 1986; Ericsson and Vonlanthen, 1986; Flognfeldt, 1994; Velvin *et al*, 2000).

Generally speaking, there are many sources of error regarding the measuring of expenditure (Frechtling, 2006; Mehmetoglu, 2007). As an example of minimizing error factors that we as researchers may influence, the second home owner was asked to have access to the questionnaire during visits to the recreational home during the data collection period, and to make a record of purchases made during the last holiday and weekend visits by category and by the corresponding costs.

In our analysis, we apply multiple regression analysis when looking at the connection between the dependent and the independent variables. We apply t-tests when comparing variables for two groups, in addition to Pearson and Spearman correlation coefficients when analysing correlation between the variables.

Dependent variable

The dependent variable 'Annual expenditure' is related to the second home owner's purchase in Norwegian kroner (NOK) of products locally in the host municipality.

In our study the annual expenditure equals the daily average of purchases made at stores in the host municipality during the last holiday and weekend visits, multiplied by the number of days the second home has been in use by the owner and by family members or others travelling with the owner during the 12 months cycle.

Independent variables

Some of the independent variables included in our study have been applied in previous second home studies as indicators of local value formation. Based on general studies on tourism, 'Salary' and 'Age' were included as variables that influence expenditure (Mehmetoglu, 2007). We also included factors related to the second home itself, as these factors might be useful for the host municipality in its CED strategy for increasing the local value formation. The independent variables included are reviewed below.

Local trading structure
With reference to Norwegian Census Bureau (Statistics Norway, 2010) for retail sales per inhabitant in Buskerud County, we assume that municipalities with sales figures below the retail sales median have a weaker trading structure than those with sales above the median. The reasoning behind this assumption is that the municipalities with sales per inhabitant below the median show a trade deficiency, in contrast to those with sales per inhabitant above the median. Towns and villages with a wider selection of shops will feature higher sales figures than towns and villages with a more limited range. Indeed there have to be places to spend money in order to create local value formation (Velvin *et al*, 2000).

Travel distance
In the early 1980s, the travel distance between the permanent residence and the recreational home was already considered a factor for local trade, as long distances would make it difficult to bring commodities from the residence to the second home (Bohlin, 1982). This may indicate that longer travel distances lead to more local trade.

Second home standard
Many old second homes in the Nordic countries do not have facilities such as electricity or water supply systems. We assume that this may have an influence on the frequency of use of the second home, and thus on local trade in the host municipality. The values of the variable 'Standard' are defined by: (i) second homes without water supply and without 220V electricity from the grid, but possibly with 12V electricity generated by solar panels, (ii) second homes with 220V electricity either from the grid or generated by other sources, but without water supply, (iii) second homes with 220V electricity and water supply. Value 1 represents a simple standard while value 3 represents a normal residential standard in Norway.

Gross floor area
In the case of 'Gross floor area', the assumption is that the larger the second home is, the greater the number of people that can be accommodated. A large living space also allows the installation of a variety of utilities, which might lead to an increase in purchases locally. The variable is divided into eight categories, from category 1 for second homes smaller than $50m^2$ in floor area to category 8 for those bigger than $210m^2$. The average recreational home has a floor area of $72m^2$.

Accessibility by car in winter
There is usually a lot of snow during winter in rural areas in the south eastern part of Norway, and weather conditions can change quickly. As a result, many roads that lead to second homes and second home areas are closed during the winter, and the homes can be reached only by skiing or snow scooter. One may therefore assume that the degree of accessibility to second homes during winter time will influence the level of local trade. Open roads would make it easier to go shopping, and one would not have to pack all necessities at home to prepare for snow scooter transportation to the second home (Soltvedt and Velvin, 2000).

Gross income of owner family
Several studies on tourism have found a significant correlation between a family's gross income and expenditure (Mehmetoglu, 2007). One study on tourist expenditure concluded that gross income was the most significant factor in explaining expenditure (Agarwal and Yochum, 1999). It would therefore be natural to assume that the higher the gross income of the second home owner's family is, the higher the influence on local expenditure in the host municipality.

Owner's age
General studies on tourism show that young people spend more money than seniors (Mok and Iverson, 2000). Therefore, we presume that the age of the second home owner might have an influence on local expenditure in the host municipality.

Distance between second home and local business centre
By using the same reasoning as for travel distance, we assume that a shorter distance from the second home to the closest business centre will lead to an increase in the local formation of value, as it makes shopping easier.

On the basis of the dependent and the independent variables, we have developed a research model in which all the continuous variables and the dependent variable are logarithmically transformed. We differentiate between continuous variables, and discrete, dichotomous variables with fewer alternative value choices. The discrete variables are not transformed. This leads us to applying a model on the following mathematical form:

$$\ln(y) = C_1 + \sum_{i=1}^{n} \alpha_i \ln(x_i) + \sum_{j=1}^{m} \beta_j x_j,$$

or expressed by

$$y = C \prod_{i=1}^{n} x_i^{\alpha_i} \cdot \prod_{j=1}^{m} e^{\beta_j \cdot x_j},$$

where y is the dependent variable; x_i, x_j for $i = 1...n$, $j = 1...m$ are the independent variables; α_i, β_j are coefficients to be estimated; and C, C_1 are constants.

Results

In the analysis, we have included only those respondents who offered enough information to enable the estimation of 'Annual expenditure' (1,216 respondents).

The variable 'local trading structure' may have a significant influence on annual expenditure. This might create difficulties when applying one single model to describe the annual expenditure both for municipalities with a strong trading structure and for those with a weak trading structure. In order to investigate whether there are differences between the municipalities in this regard, we have divided the respondents in two groups according to trading structure. We found an average difference in annual expenditure of nearly NOK28,000 ($p < 0.001$), and a median difference of just above NOK10,000.

This suggests that the trading structure might be a *premise* for annual expenditure, and more so than being an *independent variable* influencing the annual expenditure.

Accordingly, on the principle of 'better safe than sorry', we have chosen to divide the data material into two groups, one representing a strong trading structure and the other a weak trading structure.

An analysis of the correlation between each of the independent variables and 'Annual expenditure' (see Table 1) will point to the importance of each variable in explaining changes in annual expenditure. All correlations are significant ($p < 0.01$), which can be explained by the large number of respondents.

A regression analysis shows that 'Travel distance' has minimal influence on annual expenditure ($p > 0.69$), for both municipality groups. We have therefore chosen to disregard the variable 'Travel distance' in our further analyses.

Table 2 shows the results from a municipality with a strong trading structure. All factors are significant, and the multiple correlation coefficient is $R = 0.605$ and $R^2 = 0.366$ for $N = 308$. The independent variables explain approximately 37% of the variation in annual expenditure, which is considered to be fairly strong.

Table 1. Correlation coefficients for independent variables (predictors).

Variable	Pearson correlation
Standard	0.441*
Gross floor area	0.430*
ln(Gross income)	0.304
ln(Age)	–0.184
Accessibility winter time	0.190*
ln(Distance to local business centre)	–0.181
ln(Travel distance)	0.188

Note: *Spearman correlation factor (variables are on the ordinal scale). However, the Spearman and Pearson correlation factors are approximately the same.

Table 2. Regression results: annual expenditure by strong trading structure.

	B	Std error	Beta	*t*	Sig	Lower bound	Upper bound
(Constant)	7.258	2.092		3.470	0.001	3.141	11.375
Standard	0.480	0.111	0.248	4.308	0.000	0.261	0.699
Gross floor area	0.219	0.058	0.217	3.766	0.000	0.104	0.333
Access.winter	0.416	0.150	0.133	2.769	0.006	0.120	0.711
ln(Gross income)	0.298	0.107	0.142	2.783	0.006	0.087	0.509
ln(Age)	–0.820	0.311	–0.125	–2.638	0.009	–1.433	–0.208
ln(Distance to local centre)	–0.195	0.068	–0.139	–2.868	0.004	–0.329	–0.061

The two factors with the largest influence on annual expenditure are 'standard' and 'gross floor area', with Beta values of 0.248 and 0.217, respectively. The other factors, such as 'accessibility in winter time' and 'income', influence annual expenditure less. It is interesting to see that the second home owner family's gross income has a Beta value of 0.14, which is considerably lower than that found by Agarwal and Yochum (1999) in their study. The effect of the second home owner's age is in accordance with previous findings in studies on tourism; the higher the age, the lower the annual expenditure. Also, the longer the distance between the second home and the rural business centre, the lower the annual expenditure.

In order to simplify our model and yet maintain an acceptable explanation for the changes in annual expenditure, in Table 3 we present a regression analysis involving only the two variables 'Standard' and 'Gross floor area'. This gives $R = 0.539$ and $R^2 = 0.291$, which means that these two variables explain a little less than 30% of the variations in annual expenditure.

Table 4 shows the relation between annual expenditure and the independent variables. The multiple correlation coefficient is $R = 0.389$ and $R^2 = 0.152$ by $N = 908$. This suggests that for municipalities with a weak trading structure the independent variables are less important in explaining variations in annual expenditure compared to municipalities with a strong trading structure. 'Standard' and 'Gross floor area' are the most important variables in this model as well, with Beta = 0.151 and Beta = 0.159, respectively.

Table 3. Regression calculation result: annual expenditure by strong trading structure.

	B	Std error	Beta	*t*	Sig	Lower bound	Upper bound
(Constant)	7.205	0.220		32.725	0.000	6.772	7.638
Gross floor area	0.329	0.055	0.328	5.930	0.000	0.220	0.438
Standard	0.558	0.107	0.289	5.223	0.000	0.348	0.768

Table 4. Regression calculation results: annual expenditure by weak trading structure.

	B	Std error	Beta	*t*	Sig	Lower bound	Upper bound
(Constant)	9.454	1.866		5.067	0.000	5.790	13.118
Standard	0.305	0.090	0.151	3.402	0.001	0.129	0.481
Gross floor area	0.214	0.056	0.159	3.813	0.000	0.104	0.324
Access in winter	0.260	0.113	0.095	2.301	0.022	0.038	0.482
ln(Gross income)	0.092	0.097	0.039	0.954	0.341	–0.098	0.282
ln(Age)	–0.797	0.242	–0.131	–3.298	0.001	–1.272	–0.323
ln(Distance to local centre)	–0.126	0.106	–0.043	–1.185	0.236	–0.335	0.083

Table 5. Quality checks of data material by coefficient calculations.

	Coefficients						*R*	R^2
	Standard	Gross floor area	Access in winter	ln (Gross income)	ln (Age)	ln (Distance to centre)		
Municipality with strong trading structure								
All	0.5	0.2	0.4	0.3	–0.8	–0.2	0.61	0.37
Group I	0.5	0.3	0.5	0.4	–1	–0.2	0.64	0.41
Group II	0.4	0.2	0.4	0.3	–0.6	–0.2	0.57	0.33
Municipality with weak trading structure								
All	0.3	0.2	0.3	0.1	–0.8	–0.1	0.39	0.15
Group I	0.2	0.2	0.6	–0.02	–0.9	–0.04	0.41	0.16
Group II	0.4	0.2	–0.1	0.2	–0.7	–0.2	0.40	0.16

The coefficients (B-values) for each individual group are approximately the same with regard to both strong and weak trading structures, and nearly all are well within their respective confidence intervals, with the exception of the variable 'Accessibility by car' in municipalities with a weak infrastructure. The model for municipalities with a weak trading structure gives a low R^2, which indicates that this model can only vaguely hint to an influence of these independent variables on annual expenditure. Other factors that are not included in the model, may therefore to a larger extent explain changes in annual expenditure. Our findings may also indicate large random variations among the individual second home owners in this type of second home area.

In order to examine the quality of the data material, we divided the data for each municipality type (strong versus weak trading structure) into two groups by random selection; that is, we formed a total of four groups. In Table 5, we present the coefficients (B-values) for the independent variables as related to the respective groups (the coefficients are rounded off to one decimal except for R and R^2, which have two decimals).

Our quality checks suggest that the data material is relatively consistent, indicating that our findings are sound. However, there still may be problems with multicollinearity associated with regression analyses; that is, dependency between two or more independent variables. Calculating the tolerance can indicate to which degree such dependencies are present. Tolerance near 1 is favourable, while values near 0 indicate dependency problems. All the tolerance values calculated for our analyses are greater than 0.638, which is considered acceptable (Keith, 2006).

In Tables 1–5, we attempt to establish which variables/factors are important for local economic sustainability in municipalities with a strong trading structure, as well as in municipalities with a weaker trading structure. By focusing specifically on the municipalities with a strong trading structure, we show that it is possible to reduce the research model to contain only two factors that still explain a little short of 30% of the variations in annual expenditure. If we present this model mathematically, we have:

ln(annual expenditure in NOK)=0.6×'Standard'+0.3×'Gross floor area'+7

Here, we look at the effect of these two factors on local annual expenditure for two different second homes, one being of normal standard and average size ($72m^2$), the other being of high standard with a gross floor area of $100m^2$.

Normal standard and average gross floor area:

ln(annual expenditure in NOK) = 0.6×2+0.3×3+7=9.1

That is, annual expenditure = $e^{9.1}$ = NOK8,955 = NOK9,000

High standard and gross floor area of $100m^2$:

ln(annual expenditure in NOK) = 0.6×3+0.3×4+7=10

That is, annual expenditure = e^{10} = NOK22,060 = NOK22,000

We see that second homes of high standard and with a gross floor area of $100m^2$ have more than the double of local annual expenditure compared to second homes of normal standard and average size.

Discussion

In studies of the spending behaviour of ordinary tourists, expenditure is often related to either socio-economic or psychographic factors. However, the second home tourist always returns to the same place. Therefore, to a large extent the psychographic factors are given for each individual second home. Norwegian studies point to this conclusion based on how people spend their time while at the second home (Kaltenborn *et al*, 2005).

Using the second home as a portal to experiencing nature has been and still is the tradition in Norway (Flognfeldt, 2004; Kaltenborn *et al*, 2005). This shows that the individual's relation to nature is of great importance in Norway. Using nature and activities connected with nature in a given area may thus be linked to the maintenance and strengthening of one's identity and to showing off status, and the permanent second home may be a way to display status and to deal with identity.

One of the most important premises for local spending seems to be local trading structure. In our analysis we examined local expenditure in relation to trading structure, which led to the classification of second home host municipalities into two different groups: those with a strong trading structure and those with a weak trading structure. Our classification is based on the principle of 'better safe than sorry'. In testing the research model on the basis of trading structure, we found that the model could be used in both examples – either for strong structure or for weak structure. However, the model yields a difference between the two cases in explaining variations in the second home owner's expenditure.

In the literature, the dominating 'truth' has been that the longer the travel

distance between the primary home and the second home, the higher the expenditure in the municipality where the recreational home is located (Bohlin, 1982). One of the interesting findings in our study is that travel distance/travel time is not an important factor in explaining the second home owner's expenditure in the host community. However, our data set does not allow us to determine why.

Furthermore, our findings show that specific conditions linked to the second home building itself explain the owner's local expenditure to a larger degree than the socio-economic factors. By simplifying the model and using only the two factors 'Standard' and 'Gross floor area' in the context of a strong trading structure, we find that these two factors may explain a little short of 30% of the variations in local annual expenditure. According to our calculations of the impact of each individual second home on local business, we find a difference of NOK13,000 in annual expenditure in favour of large second homes of high standard. This example points to what the municipality might expect in terms of an increase in local sales when welcoming the type of second home that leads to the highest local formation of value.

The formation of value associated with each separate second home may seem low, and the following question may arise: in view of this will it be appropriate for a municipality to encourage the building of second homes? We believe so, for the following reasons. In our study we have looked only at each owner's yearly consumption, disregarding the formation of value associated with the purchase of the land and the construction and eventual later major upgrading of the second home. These activities will most likely contribute to economic growth in a life cycle perspective. And in addition to discussing the more direct and obvious economic benefits associated with second home tourism, several of the studies to which we have made reference have looked at economic benefits in a wider perspective. For instance, second home owners spending time in the municipality often wish to contribute to the success of local companies in different ways. As an example the owners may be valuable potential candidates for boards of directors, or they may want to invest in local enterprises (Flognfeldt, 1996; Velvin, 2003).

Owners of second homes of high standard will naturally demand a high standard on infrastructure and the various other facilities in the area. In Norway the municipal government is normally only responsible for the land zone planning of recreational areas, while construction companies in most cases have to carry the costs of planning and building the appropriate infrastructure in the areas set aside for second homes, in addition to building the second homes to be put up for sale. Most of the costs incurred are in turn transferred to the second home owners rather than burdening the budgets of the municipality. However, by virtue of being responsible for the land zone planning the municipality government should always carefully consider to what degree the construction of a new second home area would benefit the municipality itself. The government should allow the building of second homes only in areas which would yield sufficiently high economic sustainability. It should also be emphasized that a municipality needs a population of second homes above a certain critical mass to achieve satisfactory economic returns on the overall investments made (Velvin, 2003).

As our findings clearly indicate that conditions related to the second home

building itself are the factors that lead to local formation of value, the choice of local economic development strategies will be important. An obvious CED strategy would be to create zones for second home buildings of high standard and a large gross floor area.

Municipalities might find that a focus on developing compact zones, which allows the building of large second homes through providing roads and common water supply and sewer systems, might satisfy different aspects of sustainability. *Ecological* sustainability might be achieved by concentrating the second home development in areas chosen deliberately to avoid building activity in areas worthy of protection. Furthermore, the provision of quality water supply and sewer systems in regulated areas would minimize pollution. We maintain that by and large these qualities counteract the substantial investments and high consumption of energy required for the large second homes in a sustainability perspective. Our findings show that these second homes have a considerably larger impact on local value formation than smaller recreational homes located outside of the compact zones.

A concentration of second homes, as opposed to second homes scattered over a large area, gives the local municipality a better chance to coordinate and arrange for different types of services and activities for second home users. This enhances the attention to social and cultural needs, and strengthens *social* and *cultural* sustainability as related to the use of second homes.

As a result of the weakened economy of the primary industries, economic sustainability in small municipalities is closely linked to the ability to create new employment opportunities. Extensive cooperation between different organizations or individuals is thus needed to secure economic gain and avoid a decrease in the local population. First, cooperation between landowners could imply a distribution of profits between those who provide for building activity on their property and those who put their property at the disposal of second home users to practise activities such as skiing and hiking, free of charge. Second, it is important that business operators create a varied offer of commodities and services to meet the demands of second home users. And third, the local government, by virtue of being the planning authority, can arrange for second home development projects that satisfy broad aspects of sustainability.

Conclusion

Our investigation shows that the municipality, as an active planning authority and organizer for the development of the local trade structure, plays an important role in determining the degree to which second homes will lead to local value formation. To fulfil this role, the local government needs to understand what kind of second home tourism will create economic growth. Our study may be considered a contribution in this respect. Furthermore, it is imperative that the local government lays the groundwork for permanent business development related to second home tourism. It appears that the building of large recreational homes in concentrated areas not only leads to economic sustainability, but also to long-term sustainability with respect to socio-culture and ecology. Through creating zoned and compact areas for second home development, easy access can be secured for second home owners to social

and cultural services and at the same time areas with important natural amenities can be protected.

From a research perspective, it is desirable to investigate whether these findings are particular to Norwegian conditions, or whether they may also be valid for other parts of the world. Furthermore, it would be useful to carry out additional investigations to examine in great depth the links between the different perspectives on sustainability in order to develop models for optimizing the interaction between these perspectives in relation to second home tourism.

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