The ecology of organisations in Danish tourism: a regional labour perspective

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Abstract:

Tourism is often claimed to be a major employment-creator and a viable path to development in rural areas. With the exception of the most sparsely populated areas, this is supported by Danish data for the overall growth in the number of enterprises and jobs, covering the period 1981-1994. The paper demonstrates and discusses the dynamics of regional tourism development in terms of the establishment, the survival and mortality of restaurants and accommodation facilities. This study of the ecology of organisations unveils a considerable turbulence, i.e. considerable numbers of firm entries as well as exits. Stability tends to correlate positively with urbanisation. In addition, the higher stability of enterprises in urban areas results in qualitatively different types of employment but, surprisingly, size and age of the organisation rather than managerial capacity or trained personnel seem to determine the chances of survival.

Introduction

Disadvantaged regions and declining urban areas frequently clutch at tourism as the last chance for economic recovery. The economic strategies of these regions are supported by favourable global growth trends in tourism, which are often presumed to translate, more or less unabated, into increased economic activity at the local level (Inskeep, 1994; Smith, 1992; Theobald, 1994; WTO, 1997). Evidence based on tourist numbers and expenditure indicates that the benefits of tourism are widely spread, and that formerly closed or less accessible areas, for example in Eastern Europe, are catching up quite rapidly.

While the benefits at the national level might be considered fairly obvious, they are less clear at the regional level. In a geographical sense, tourism is a multi-faceted activity (Pearce, 1991), and the blights and blessings are not uniformly distributed. Regional outcomes are determined by numerous factors, for example differences in natural endowments, facilities and infrastructure, and accessibility. As tourism relies heavily on natural resources, there are many pointers towards the inclusion of this particular economic sector in development strategies in remote or rural areas.

Political concern is often placed on the job creation side. But what kinds of jobs are created, and for whom? The assumption is frequently made that tourism can replace

employment opportunities that disappear due to productivity gains in agriculture and manufacturing industries. (Commission of the European Communities, 1994). But shifts towards services also raise the expectations of a new supply of jobs for a better educated workforce which, in a wider sense, could be beneficial for the local economies.

With the use of empirical data from Denmark, this article addresses the potentials of tourism as a sector for development, and extracts data from the restaurant and accommodation sectors for this purpose. The presentation of empirical evidence falls into two distinct sections. First, the context of regional tourism development in Denmark is set. The section provides a general and basic framework for an evaluation of growth prospects. A framework of this kind is often used as the foundation for regional policies, but it cannot be regarded sufficient for a more comprehensive understanding of underlying dynamics in the sector. Therefore, as a second and major part of the presentation of the empirical evidence, the sector will be analysed in terms of the enterprise establishment, survival and mortality rates. Instead of looking at the net development exclusively, this part recomposes the gross developments of the population of enterprises taking place in the period 1981-1994. The very simple logic employed is that the scope and scale of the turbulence crucially influences prospects in a region. If, for instance, the entries and exits reach excessive levels, this might compromise not only an accumulation of capital and incomes, but also the building of sufficient and lasting repositories of competence and knowledge. Contrarily, if a large population of enterprises survives unchanged for a long period of time, the sector might also end up in a vulnerable position lacking the sufficient risk based stimulation for continual innovation and renewal.

The empirical documentation provided in the article is firmly entrenched in the long-established tradition of organisational ecology (reviewed by Freeman (1982), Baum (1996, and Singh and Lumsden (1995)). The ecology approach focuses on selection processes in a population of enterprises. This does not mean that the conscious actions of individuals enterprises and managers do not matter, just that these actions are influenced by the environments and that they emerge with random effects. Ecological research on organisational populations often utilises very long time series, and aims at explaining how social, economic and political conditions affect the abundance and the composition of organisations over time (Baum 1996). The importance of organisational interdependencies (density and hereby the level of competition, and niche-width, which comprises the effects of specialisation) is crucial in a number of inquiries. So is the role of the size and age of enterprises in the population. In all studies, data on events of foundings, survivals and failures are the key sources, and various attributes are attached to these life events of individual organisations in the population. Table 1 provides a brief overview of the most common explanatory variables included in populations studies.

(Table 1 about here)

This paper adds a further environmental element to Baum's (1996) list, namely geography, here in the sense of the degree of urbanisation¹. The concept is related to the density issues mentioned in table 1, although the population size replaces the number of enterprises as an indicator. Tentatively, the article also challenges the population ecology tradition by including the composition of labour as a supplement to the analysis of demographic processes². The idea is to investigate whether the survival of organisations is influenced positively by a higher managerial capacity in the organisations and whether any significant regional differences can be observed. In fact, by this attempts to add an element of managerial discretion to the analysis. The models later in this article test the explanatory power of labour composition vis-à-vis standard variables such as enterprise size and age.

However, it must be emphasised that the level of sophistication of data and analysis in this paper does not fully match that in recent studies in organisational ecology. Furthermore, data on the geographical characteristics of the labour force in tourism are collected for purposes other than organisational ecology and are not directly tied to the analysis of the establishment, survival and failure of business enterprises. This implies, for instance, that we cannot take a full account of variations due to seasonality, and that employment levels cannot be adjusted for part-time positions.

The availability of long time series of data is crucial to the analysis of organisational foundation, survival and mortality. Ideally, time series should cover the entire period of existence of the population as, for example, in the studies of co-operative banks in Italy (Lomi, 1995) and breweries (Hannan and Freeman, 1989). In many cases, however, data does not exist for consistent time series covering a century or more. While this study has access to data of high quality and consistency, the material only covers the period 1981-1994. The enterprises included in the study are operating units, i.e. workplaces with a salaried workforce. Companies can consist of several such geographically dispersed units. Since this paper focuses on geographical and employment issues, companies are not considered relevant as units for analysis. Throughout the paper, the workplaces will be called "enterprises". The establishment, survival and mortality of enterprises are complex phenomena, which are not easy to register unambiguously. The IDA data bank³, which is used as a source for this analysis, records several categories, mainly based on labour force movements. For example, an enterprise may survive legally, but nevertheless lose its status as a place of work, that is its identification as an organisation. Similarly,

businessmen and women can operate permanently, or for a long period of time, without salaried employees. To ensure the highest possible consistency and avoid the effects of passive organisations in the data set, therefore, only employers are included in the analysis.

Geographical development in the restaurant and accommodation sector

Since the first regional development act in Denmark in the early 1950s, uneven economic conditions determined a series of policies comprising subsidies for enterprises, infrastructure investments, and the expansion of educational facilities etc. The problems initially envisaged in Denmark were the "classical" ones: rapid mechanisation of agriculture, leading to high unemployment rates in rural areas, while a favourable development could be observed in larger cities. Over the next decades, a significant restructuring took place (Maskell 1986). Manufacturing industries expanded in the Western part of Denmark and in many rural areas, while the service sector and particularly advanced industries (for example in pharmaceuticals and electronics) developed with considerable success in the metropolitan areas. The latest development has seriously questioned traditional regional policy paradigms. Regional differences in terms of for instance unemployment are diminishing, while other and more complex patterns of specialisation are replacing the previous picture (Maskell 1992).

The role of tourism in the Danish economy is not insignificant compared to the rest of Europe (Eurostat 1998). Over the past decades, incoming tourism has expanded progressively, predominantly as an outcome of increased German demand for rented holiday cottages (Danmarks Turistråd 1998). Nearly all regions have benefitted from activities connected to tourism, although some variations can be observed (Rafn 1996). In the following discussion the focus is on the number of restaurants and holiday accommodations facilities.

Figure 1 illustrates the growth of the restaurant sector⁴. In the period 1981-1994, the number of restaurants increased by 20%, to a total of 6,500. Growth slowed only during the period 1988-1990, due to political intervention aimed at limiting private consumption.

(Figure 1 about here)

It is interesting to observe that, until very recently, the number of restaurants in the metropolitan area has grown quite modestly, while other types of municipalities have experienced more rapid growth. Growth has been more unstable in rural areas, and not visibly influenced by various political interventions, but there has been a genuine decline

in the period 1990–1994.

The metropolitan area is likely to have established a fairly high level of catering opportunities at an early stage, while urban lifestyles are adopted later in smaller towns, villages and rural districts. These regions are catching up. The decline in rural areas may be due to the difficulty of running a restaurant in sparsely populated areas; after years of effort by new and existing owners to stay in business, there has been a rash of closures. This will be examined in more detail later.

The development process found in the accommodation sector (hotels, camping sites, and youth hostels)⁵ is illustrated in figure 2.

(Figure 2 about here)

From 1981 to 1992, there was an overall increase in the number of enterprises in the accommodation sector, from 1195 to 1225 units. Compared with the growth in the restaurant sector, this is a modest increase. The lack of interest in investing in new hotels, youth hostels and camping sites may be due to a considerable over-capacity and low return on investment throughout the period (Holm-Pedersen et al., 1993; Pade & Partnerne 1992). Moreover, tourists increasingly prefer alternative accommodation, predominantly rented holiday cottages (Danmarks Turistråd, 1998). Unfortunately, the enterprise developments connected to the latter activity cannot be included in this analysis.

It can be presumed that accommodation and restaurant facilities develop interdependently. A bed and access to food are the basic needs of any tourist. However, it is only in rural areas that there is any plausible correlation between restaurants and accommodation facilities. In other areas, the effects of local residents' spending on restaurants will tend to modify the correlation between the development of catering and accommodation.

Foundations and failures – main findings

The glamorous picture of growth in tourism conceals the extent and nature of the more subtle dynamics of the sector. The establishment, development and maintenance of a business is, of course, the result of the skills of the individual businessperson and the success of the strategy adopted. But organisational ecology focuses on the environmental context that produces variations in organisational foundation and failure rates over time, rather than individual skills.

A first insight into the underlying dynamics of the sector is given in table 2 which shows the annual average and standard deviation of survival, foundation and failure rates for the period 1981-1994 for restaurants and accommodation respectively. The following definitions are used for the "population ecology events" included in the analysis:

Survival : Enterprises with a salaried workforce, which continue unchanged from one year to the next, though there can be supplements to the workforce or dismissals to/from other enterprises.

Three types of foundation can be distinguished:

New enterprises : Enterprises not found in the data set in previous years.

Spin-off enterprises : Enterprises established through the formal segregation of part of another enterprise, where the majority of employees are kept on.

Barrier-breaking enterprises : Enterprises which, in the previous year, existed without a salaried workforce, e.g. "mom-and-pop" businesses or passive enterprises.

As regards failures, only total closures are included in this data set. Registrations concern events which take place from one year to the next, and averages over the period 1981-1994 are calculated.

(Table 2 about here)

There is considerable turbulence in tourism (Figure 2): from one year to the next, and accumulated for the period 1981-1994, only 76% of restaurants survive. The average survival rate for accommodation establishments is somewhat higher, at 82% per year. There is some association between survival rates and geography: a location in an urban area increases the probability of survival, albeit only slightly.

The above picture is supplemented by the standard deviation for the two areas. The relative dispersion in the number of surviving restaurants in the period concerned is lower in urban areas than rural areas. This pattern is not seen in the case of accommodation facilities, however.

Most of the firms founded are completely new organisations (Table 3). Annually, 15.3% of the population of restaurants is renewed by the foundation of new enterprises, while 5.5% is renewed as a result of enterprises shifting from being purely family-based or passive to active employers. Spin-offs account for a smaller number. The same pattern is found in the

accommodation sector, though the foundation rates are lower in all groups.

(Table 3 about here)

Firm dynamics are less accentuated in urban areas than in more sparsely populated locations. But the composition of the foundations differ in important respects. The rate of spin-offs correlates positively with urbanisation, probably because higher density facilitates such transformations. By contrast, the considerable number of foundations based on the transformation of family enterprises to employers is characteristic of rural and other sparsely populated areas. Enterprises of this kind can move in and out of the status of being an employer for years before finally closing, or until they are assured of a sustained higher level of business.

The various means and standard deviations give a blurred picture. Notwithstanding, there is some indication that, for restaurants, turbulence as reflected in the variance of foundations in the period 1981-1994, is higher in small communities and sparsely populated areas. However, this is not the case for foundations based on the development of family-based enterprises, which is obviously a normal business practice in rural areas and village economies, in that it takes place with "standard" frequency.

We now turn to the geographical distribution of failures. Only one type of event is included in Table 4: final closures, where employees are dismissed and the organisation is dissolved. The proportion of failures correspond to average foundation rates (new enterprises). While fewer enterprises were established in densely populated areas, failure rates are also (slightly) lower than in rural areas and villages.

(Table 4 about here)

Of interest here is whether there is a "hard core" of enterprises that are not affected by turbulence, and, if so, whether there are any specific regional differences in the proportion of such enterprises. In order to illuminate this, Figure 3 shows the survival rates of the 1980 population (all enterprises) for the period 1981-1994.

(Figure 3 about here)

It can be seen that, over a period of 14 years, there is a considerable, but gradual, decline in the number of enterprises. At the end of this period, less than 20% of restaurants have not been through major organisational change. Closure rates are particularly high during the "infancy period". When regional aspects are included, it can be seen that the initial vulnerability is higher in less urbanised areas. However, in the long term, survival rates

end up at approximately the same level.

Very similar conclusions can be drawn about the survival of accommodation facilities, though, on the whole, hotels, camping sites and youth hostels are less likely to close or undergo major organisational change than restaurants (Figure 4). There is no long-term regional congruence of survival chances for the population of accommodation facilities as there is with the population of restaurants.

(Figure 4 about here)

Composition of labour

This section takes a more detailed look at the establishments from a labour perspective. As mentioned in the introduction, employment is often the main driving force of tourism policies., but the crucial issue is whether the "ecological" processes compromise the job objectives. To provide a first overview, figure 9 shows some remarkable differences in the composition of labour in the metropolitan area and the rest of the country.

The period 1985-92 saw a considerable increase in employment in non-metropolitan areas, while in Copenhagen and its suburbs, there was a small job loss. Interestingly, the growth in jobs does not affect personnel turnover, which is very high in both regions. Rapid turnover seems to be a structural rather than a geographically-determined phenomenon, and it is not likely that the growth *per se* in tourism will result in a stabilisation of employment.

The recruiting patterns of metropolitan tourism enterprises differ in their greater use of immigrants. Immigrant labour is in greater supply in large cities, which is partly the reason for the relatively high average in these areas.

(Table 5 about here)

While the employment of students (working part-time) is surprisingly high all over the country, the geographical variation is remarkable. Despite the high concentration of educational institutions at all levels in the metropolitan area, student labour is more intensively utilised by enterprises outside the metropolitan area.

Correspondingly, the employment of workers with a formal education in tourism is more pronounced in the metropolitan area than in other parts of the country. Generally, the overall number of trained cooks, waiters, receptionists, tourism economists and sales persons, etc., is rather limited compared with the number of students who have graduated

in these areas over the past few decades (Hjalager, 1996). Accordingly, the high turnover rate is also explained by a search outside core tourism for better-paid jobs, more convenient working hours, etc. (European Institute, 1991; Iverson and Deery, 1997; Riley, 1991, Lucas 1995). To the extent that students do take up permanent residence at the site of work, this employment represents a net surplus (tax-paying and economic activity) for less urbanised areas. However, the loss from local economies caused by a geographically mobile and flexible student workforce is a fact that should be considered when evaluating the benefits of tourism development in remote or sparsely populated areas.

Women are particularly heavily represented in tourism jobs outside the metropolitan area. This could be due to a number of reasons. The highest proportion of women in tourism is found in west Jutland, in areas with very low average unemployment rates, where the male labour force is more likely to be employed in (more attractive and better paid) jobs in manufacturing industries. Conversely, higher unemployment and lower growth in the Copenhagen area is associated with men remaining in the sector, since there are fewer alternatives.

These labour issues underline the need to treat the potential benefits of regional tourism development strategies with some caution. The analysis of opportunities and benefits should be modified to take account of greater instability, less attractive types of jobs, and economic losses.

The composition of labour and organisational survival

The first part of this paper discussed the ecology of tourism enterprises, and levels of turbulence were shown to correlate with the levels of urbanisation. The next section addressed regional differences in the composition of labour, documenting the (in a traditional sense) less sustainable recruiting practices in non-metropolitan areas. Combining these two aspects raises the question of whether the composition of the labour force has any significant effect on organisational survival.

To help answer this question, a regression analysis of the ecology data was carried out. Enterprises that existed in both 1993 and 1994 are included in the analysis. Their survival is related to age and size and, in Model 2, to the proportion of unskilled and skilled workers and junior and senior managers. Table 6 shows parameter estimates and standard deviation test results in the case of restaurants.

(Table 6 about here)

As in most other ecology studies, a clear relation can be found between age and size on the one hand, and survival on the other. Business strategies aimed at securing advantages of scale, and which rely on the internal division of labour, seem to enhance survival chances relatively uniformly. As experience is gained and organisational set-ups and routines are established, enterprises have a greater probability of survival. The effects of age and size applies to restaurants in all five regions without any significant variation.

Labour consists of two categories of managers and two of employees in operational functions. The restaurants' human resource policies are not significantly correlated with survival - size and age have a more decisive explanatory value. For example, a substantial managerial capacity does not seem to prolong the life of restaurants to any significant degree, nor does the existence of relatively numerous skilled workers.

It was previously stated that restaurants in the metropolitan area employ comparatively more skilled workers. This analysis shows that giving a higher priority to this category of labour does not offer any guarantee of survival. Nor does a relatively high proportion of any other category of staff increase the likelihood of survival.

Hotels/camping sites are generally larger enterprises than restaurants and, in consequence, can be expected to put a greater emphasis on management capacity and to formalise these employment categories more than smaller enterprises (Hjalager, 1996). However, it is not possible to show from the regression analysis (Table 7) that the proportion of managers is a particularly significant factor in the survival of these enterprises. Nor do other categories of staff crucially influence the survival rates of accommodation facilities. For example, according to these data, the use of low-skilled operating staff cannot uniformly ensure greater probability of survival. The variance in the composition of labour is considerable, and there does not seem to be any one "best practice" regarding the composition of manpower in the field of human resources management. If such a thing as a distinct regional variation in more subtle managerial traditions does exist, it is not observable in this data set.

(Table 7 about here)

Since survivals are not easily explained by the composition of labour, it is very difficult, using these types of data, to find support for regional tourism policies that focus specifically on labour or training issues. If the aim is to enhance survival in the tourism industry, other measures, with a greater focus on investments, infrastructure, concept and process innovation, quality standards, marketing, etc., would be more appropriate. Labour

market or manpower policies should be regarded as supplementary or auxiliary instruments only.

Conclusion and discussion

The data used in this paper show that tourism has contributed significantly to growth in the number of enterprises and jobs in regions normally characterised in the literature as less favoured. One exception is sparsely populated areas, where a negative trend has lately replaced former growth. Notwithstanding, it is debatable whether the non-urbanised areas fully deserve to be called less favoured any more. In the Danish periphery, there are parallel positive developments in manufacturing industries, resulting in the stabilisation of local economies and increasing employment, which is not only based on tourism.

However, considering the traditional view of regional development processes and the supplementary information in this paper, there are still some reservations. It was shown that turbulence, in the sense of the establishment and closure of enterprises, is somewhat more intense in rural regions and in regions with small towns and villages. In the traditional view of regional development, high instability and turbulence are unquestionably harmful. Annual survival rates of 76 and 82% for restaurants and accommodation facilities respectively, are low compared to other sectors⁶

Taking another view, however, the appropriateness of regional development theories or concepts could also be questioned. Are dominant regional development concepts and theories that implicitly focus on the benefits of stability losing their explanatory power? High numbers of entries and exits could, for instance, be regarded as an expression of ultimate flexibility and adaptation to extreme and rapid changes in the business environment (Lant and Mezias, 1990). Exits imply the destroying of capital and institutional set-ups and routines, and in this sense they represent monetary and personal losses. On the other hand, it can also be necessary in order to make way for new business concepts and new modes of organisational learning. The material presented here indicates that learning in the tourist sector is not a gradual and strategically well-planned and internally organised and accumulating process, as is the case in other industries. The emergence of franchised concepts in the restaurant sector, and gradually in accommodation as well, correspond to the findings. Franchised concepts represent a systematisation of knowledge collected in many units and over a longer period of time. They facilitate the entry and exit of new businesses without compromising the knowledge base.

The composition of labour could also be seen as particularly unfavourable to regional peripheries. There is plenty of evidence of low qualification levels and high turnover rates, which could be interpreted as a lack of organisational capacity and professionalism. Paradoxically, however, while positive development trends in tourism are regarded as beneficial, the composition of labour is, to some extent, inconsistent with the concepts of a modern and professional tourism sector (Poon, 1993). Most regional policies approach this dilemma by attempts to bridge the competence gaps of the workforce, and for some regions the upgrading of human resources is the only or the most important measure. This article illustrates the serious limitations of training programmes and labour market policies in the field of tourism. As an instrument of regional policy these reservations apply to all types of regions.

This study emphasises the need to be specific about the extent and consequences of underlying development, and it adds to our understanding of some regional aspects. In tourism research the organisational ecology approach is still not well developed. The findings presented here answer some question, but also raise new ones. As Denmark, in regional sense, is fairly homogeneous, a replication of the study in other countries with diverging regional structures is desirable. The study focuses on the enhancement of human resources as an instrument in the development process. As these resources are fairly insignificant as explanatory variables for business success, further studies will have to take a broader perspective on managerial strategies. A better understanding of the regional impacts on business survivals of (international) franchised chains and brands is particularly crucial.

Table 1: Major ecological processes in organisational foundation, survival and failure

Approach	Key variables
Demographic processes	<u>Organisational age</u>

Organisational size

Ecological processes Niche dynamics, indicating that the population employs a specialist or generalist strategy, depending on the nature of the environment

Population dynamics, e.g. prior foundations or failures signalling favourable, or the lack of, business opportunities

Density dependence, e.g. the number of units in the population, indicating legitimacy and competition

Community dependency, e.g. cross-population density

Environmental processes Institutional processes, e.g. political turmoil, government regulation, and institutional linkages

Technological processes

Figure 1: Geographical development in the number of enterprises in the restaurant sector, 1981-1994, index

Figure 2: Geographical development in the number of enterprises in the accommodation sector, 1981-1992, index

Table 2: Accumulated average survival rates (percentage of population), mean and standard deviations of survivals, restaurants and accommodation facilities, 1981-1994, by location

	Metropolitan	Cities	Towns	Villages	Rural areas	Total
Restaurants						
Survival rates						
Av. annual survivals						
Standard deviation						
	76.9					
	1,538					
	45					
	76.0					
	844					
	56					
	76.1					
	878					
	66					
	75.1					
	780					
	90					
	72.5					
	534					
	43					
	75.7					
	4,566					
	289					
Accommodation						
Survival rates						
Av. annual survivals						
Standard deviation						
	84.7					
	171					
	11					
	82.6					
	105					
	7					
	83.1					
	198					
	15					
	81.9					
	282					
	19					
	79.6					
	267					
	12					
	82.1					
	1,023					
	52					

Table 3: Accumulated average foundation rates (percentage of population), means and standard deviations, restaurants and accommodation facilities, 1981-1994, by location

	Metropoli- tan areas	Cities Towns	Villages Total	Rural
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New enterprises

Restaurants

Foundation rates				
Av. annual foundations				
Standard deviation				

Accommodation

Foundation rates				
Av. annual foundations				
Standard deviation				

14.1				
282				
15				

7.2				
5.7				
1.7				

15.6				
174				
19				

9.3				
3.6				
1.8				

15.6				
180				
24				

9.5				
9.2				
1.3				

15.6				
161				
20				

10.1				
17.0				

4.2

16.8
124
20

10.9
22.9
6.5

15.3
920
111

9.6
58.2
8.5

Spin-offs

Restaurants

Foundation rates
Av. annual foundations
Standard deviation

Accommodation

Foundation rates
Av. annual foundations
Standard deviation

3.9
77
24

4.8
9.6
6.5

3,6
40
10

3.6
6.6
7.5

3.5
42
13

3.4
8.1
2.6

3.1
32
11

3.1
8.4
2.7

2.8
20
8

2.6
8.6
2.7

3.5
212
59

3.3
44.2
14.6

Barrier- breaking

Restaurants

Foundation rates
Av. annual foundations
Standard deviation

Accommodation

Foundation rates
Av. annual foundations
Standard deviation

5.1
103
30

2.9
5.8
1.7

4.8
53
12

2.8
3.6
1.8

4.8
52
15

2.9
9.2
1.3

6.1
61
8

5.1
17.4
3.5

7.8
57
7

6.8
22,7
6,5

5.5
330
57

4.7
58.2
8.5

Table 4: Average failure rates (percentage of population) and standard deviations, restaurants and accommodation facilities, 1981-1994, by location

	Metropoli-tan	Cities	Towns	Villages	Rural areas	Total
Restaurants						
Av. failure rates						
Av. annual failures						
Standard dev.						
	11.2					
	172					
	12					
	12.6					
	105					
	7					
	13.3					
	198					
	16					
	13.5					
	282					
	19					
	14.8					
	267					
	12					
	12.7					
	1023					
	54					
Accommodation						
Av. failure rates						
Av. annual failures						
Standard dev.						
	6.7					
	13.4					
	3.6					
	8.9					
	11.2					
	3.2					
	9.9					
	24.5					
	5.5					
	9.0					
	30.3					
	5.6					
	10.6					
	35.4					
	7.5					
	9.2					
	115.2					
	15.2					

Figure 3: Gradual decline of the 1980 population of restaurants in the period 1980-1994, % survivals

Figure 4: Gradual decline of the 1981 population of accommodation facilities, 1981-1992, % survivals

Table 5: Composition of labour

	Metropolitan area	Other regions
Development in employment 1985-92, % growth		
- restaurants		
- accommodation		
-1.6		
-5.6		
+ 51		
+ 16		
% female employment, 1994		
-restaurants		
- accommodation		
49		
50		
59		
63		
% immigrant employment, 1994		
-restaurants		
- accommodation		
12.2		
14.1		
3.4		
2.3		
% student part-time workers, 1994		
-restaurants		
- accommodation		
30		
28		
41		
38		
% with a formal education in tourism		
-restaurants		
- accommodation		
21		
26		
14		
13		
Labour turnover ⁷		
- restaurants		
- accommodation		
220		
186		
220		
198		
Source: IDA data bank		

Table 6: Regression coefficients of the relation between organisational survival and the proportion of specific categories of labour and restaurants, 1994 compared with 1993 (standard deviations in brackets; * = statistically significant at the 5% level)

	Metropolitan area	Large cities	Towns	Villages
Rural areas				
Model 1:				
Age				
Size				
Model 2:				
Upper management				
Lower management				
Skilled workers				
Unskilled workers				
	-0.1412 *			
	(0.0110)			
	-0.1412 *			
	(0.00379)			
	-0.00383			
	(0.00302)			
	-0.00074			
	(0.0223)			
	0.000561			
	(0.00161)			
	0.00106			
	(0.00178)			
	-0.1309 *			
	(0.0152)			
	- 0.0711 *			
	(0.00761)			
	0.00371			
	(0.00510)			
	0.00259			
	(0.00288)			
	-0.0007			
	(0.00246)			

-0.00245
(0.00255)

-0.1144 *
(0.0139)

-0.0619 *
(0.00711)

-0.00289
(0.00442)

0.00103
(0.0283)

-0.00372
(0.00299)

-0.00561
(0.00266)

-0.1131*
(0..0140)

-0.0762 *
(0.00859)

-0.00182
(0.00486)

-0.0105 *
(0.00387)

0.00135
(0.00322)

-0.00253
(0.00259)

- 0.1167 *
(0.0157)

-0.0968 *
(0.0111)

0.00311
(0.00624)

0.00316
(0.00320)

0.000116
(0.00373)

-0.00039
(0.00273)

Figure 11: Regression coefficients of the relation between organisational survival and the proportion of specific categories of labour and accommodation facilities, 1994 compared with 1993 (standard deviations in brackets; * = statistically significant at the 5% level)

	Metropolitan area	Large cities	Towns	Villages
Rural areas				
Model 1:				
Age				
Size				
Model 2:				
Upper management				
Lower management				
Skilled workers				
Unskilled workers				
	-0.1275 *			
	(0.0315)			
	-0.00488 *			
	(0.00353)			
	0.00248			
	(0.00954)			
	0.000086			
	(0.00954)			
	0.00394			
	(0.0100)			
	-0.00913			
	(0.0119)			
	-0.1366 *			
	(0.0411)			
	-0.0406 *			
	(0.0109)			
	0.0244 *			
	(0.00996)			
	0.0125			
	(0.0133)			
	-0.00109			
	((0.00894)			
	-0.00252			
	(0.0111)			

-0.1632 *
(0.0315)

-0.0334 *
(0.00822)

0.00483
(0.00929)

-0.0260
(0.0146)

-0.00292
(0.00936)

-0.0260
(0.0146)

-0.1090 *
(0.0219)

-0.0589 *
(0.00948)

-0.0164
(0.0128)

0.00653
(0.00582)

-0.0215 *
(0.00909)

0.00653
(0.00582)

-0.0829 *
(0.0229)

-0.0973 *
(0.0152)

0.000866
(0.00634)

0.00579
(0.00575)

0.00780
(0.00634)

-0.00560
(0.00632)

References cited:

- Baum, Joel A.C., 1996, Organizational ecology, in Clegg, Steward R., Cynthia Hardy and Walter R. Nord (eds): *Handbook of organization studies*, London: Sage, pp 77-114
- Barnett, William P., 1990, The organizational ecology of a technological system, *Administrative Science Quarterly*, 35, pp 31-60
- Commission of the European Communities, 1994, *The future of the community initiatives under the Structural Funds*, COM (94) 46, final, Brussels
- Danmarks Turistråd, 1998, *STABAS* (extraction of the statistical data bank)
- Doeringer, Peter B. et al., 1991, *Turbulence in the American workplace*, New York: Oxford University Press
- European Institute of Education and Social Policy, 1991, *Education for Careers in European Travel and Tourism*, London: American Express Foundation
- Eurostat, 1998, Tourism in Europe. Key figure 1996-1997, Luxembourg
- Freeman, John, 1982, Organizational life cycles and natural selection processes, *Research in Organizational Behavior*, 4, pp 1-32
- Hannan, Michael T. and Glenn R. Carroll, 1992, *Dynamics of organizational populations. Density, legitimation and competition*, New York: Oxford University Press
- Hannan, Michael T., 1988, Social change, organizational diversity and individual careers, in Riley, Matilda White (eds), *Social structures & human lives*, Newbury Park: Sage, pp 161-174
- Hannan, Michael T. and John Freeman, 1989, *Organizational Ecology*, Cambridge Mass.: Harvard University Press
- Hjalager, Anne-Mette, 1996, *Turisterhvervets arbejdskraftsamensætning*, Report for the Ministry of Trade and Industry, Copenhagen
- Holm-Petersen, Erik, Anne-Mette Hjalager, Wolfgang Franke and Peter Plougman, 1993, *Turisme/fritid - erhvervsøkonomisk analyse*, København: Erhvervsfremmestyrelsen
- Ingram, Paul and Joel A. C. Baum, 1997, Chain affiliation and the failure of Manhattan hotels, 1989-1980, *Administrative Science Quarterly*, 42, pp 68-102
- Inskip, Edward, 1994, *National and regional tourism planning. Methodologies and case studies*, London: World Tourism Organisation and Routledge
- Iverson, Roderick, D. and Margaret Deery, 1997, Turnover culture in the hospitality industry, *Human Resource*

- Lant, Theresa K. and Stephen J. Mezias, 1990, Managing discontinuous change: A simulation study of organizational learning and entrepreneurship, *Strategic Management Journal*, 11, pp 147-179
- Lomi, Alessandro, 1995, The population and community ecology of organizational founding: Italian cooperative banks, 1936-1989, *European Sociological Review*, 11, 1, pp 75-98
- Lucas, Rosemary, 1995, *Managing employee relations in the hotel and catering industry*, London: Cassell
- Maskell, Peter, 1986, *Industriens flugt fr astarbyen, Årsager og konsekvenser*. København: Nyt Nordisk Forlag Arnold Busk
- Maskell, Peter, 1992, *Nyetableringer i industrien - og industristrukturens udvikling*, København: Handelshøjskolens Forlag
- Pade & Partnere, 1992, *Sektoranalyse for hotel- og restaurationserhvervet i Danmark*, København
- Pearce, Douglas, 1991, *Tourist Development*, New York: Longman Scientific and Technical
- Poon, Auliana, 1993, *Tourism, technology and competitive strategies*, Wallingford: CAB International
- Rafn, Thomas, 1996 *Turismen økonomiske betydning for de danske øer*, Nexø: Bornholms Forskningscenter
- Riley, Michael, 1991, *Human resource management. A guide to personnel practice in the hotel and catering industry*, Oxford: Butterworth-Heinemann
- Silverman, Brian, Jack A. Nickerson and John Freeman, 1997, Profitability, transactional alignment, and organizational mortality in the U.S. trucking industry, *Strategic Management Journal*, 18, pp 31-52
- Singh, Jitendra V. and Charles Lumsden, 1990, Theory and research in organizational ecology, *Annual Review of Sociology*, 16, 161-195
- Smith, Stephen L.J., 1992, *Tourism Analysis. A Handbook*, New York: Longman Scientific and Technical
- Theobald, William F. (ed), 1994, *Global tourism. The next decade*, Oxford: Butterworth Heinemann
- W TO (World Tourism Organization), 1997, *Global Tourism Forecasts to the year 2000 and beyond*, vol 5: Europe, Madrid: WTO

¹ This analysis uses the following five agglomeration categories:

- * Metropolitan areas
- * Cities with more than 40,000 inhabitants
- * Towns with 10,000-40,000 inhabitants
- * Villages with 33-100% of inhabitants living in urbanised areas
- * Other rural municipalities

² Hannan (1988) mentions the importance of this issue, but he and other authors have not included the labour dimension in their empirical studies of organisational ecology.

³ Statistics Denmark, IDA= Integrated databank for labour market analysis.

⁴ Statistics Denmark changed the standard industrial classification system in 1992, from ISIC (International

Standard Industrial Classification) to NACE (Nomenclature general des Activités économiques dans les Communautés Européennes). 1981-1992: ISIC codes 63.101 and 63.109. 1993-1994: NACE codes: 55.30.10, 55.30.20, 55.30.90, 55.40.10, 55.40.20, 55.40.90, 55.52.00.

⁵ 1981-1992: ISIC codes: 63.201, 63.202, 63.203, 63.209. 1993-1994: NACE codes: 55.11.10, 55.11.20, 55.12.00, 55.21.00, 55.22.00, 55.23.10, 55.23.90.

⁶ Subsectors of banking and health can be shown to have annual survival rates between 92 and 98 percent.

⁷ Calculated as the number of persons employed throughout the year as a percentage of the number of employees by November 1.