

AgriFood
economics centre



Recreational Fishing Companies in Sweden

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AgriFood Economics Centre

- Cooperation between Lund University and Swedish University of Agricultural Sciences (SLU) since 2009
- Reorganization of former SLI (Swedish Institute for Food and Agricultural Economics)
- To carry out advanced economic analyses within the fields of agriculture, foods, rural development and fishery
 - The analyses function as a basis for strategic governmental decisions



Governmental interest in recreational fisheries

- Recreational fishing has become a topic in the discussion about how we should utilize the fish resources
- Assignment from the Ministry of Agriculture in 2006/07
- Analyse the economic impact of recreational fishing
 1. Utility from fishing
 2. Recreational fishing industry
- National Board of Fisheries, SLI (now AgriFood), County Administrative Boards, etc.



Recreational fishing – background facts

- In 2006 Sweden had about 1 000 000 recreational fishermen
- 18 000 tonnes of fish
- Pike, perch, pikeperch, salmon, trout, grayling, char, cod, mackerel, lobster, crayfish
- Fishermen have a willingness to pay for recreational fishing which could be turned into employment opportunities, regional development, etc...
 - Well developed in Norway, Scotland, etc.
 - What does this industry look like in Sweden?

Swedish Recreational Fishing Companies

- Limited information about the structure of the sector
- Could the sector develop?
- Obstacles for development?
- Survey study



Definition of a recreational fishing company in the study

- deliver goods or services to recreational fishers during their “ongoing” fishing trip
- Excludes equipment stores, boat factories, etc.



What is a recreational fishing company?

Activity	Definition
Renting out boats etc.	Renting out boats or other equipment for recreational fishing
Guide	Guiding recreational fishermen, with or without providing boats and equipment
Course	Learning out how to fish in one or another way
Food and accommodation	Providing food, restaurants, and accommodations in direct connection to the fishing
Put & take	Renting out fishing waters (< 1 year) with continuously planted fish
Renting out fishing waters	Renting out natural fishing waters (< 1 year)
Equipment	Selling equipment in direct connection to fishing
Other	Other activities

Survey to companies

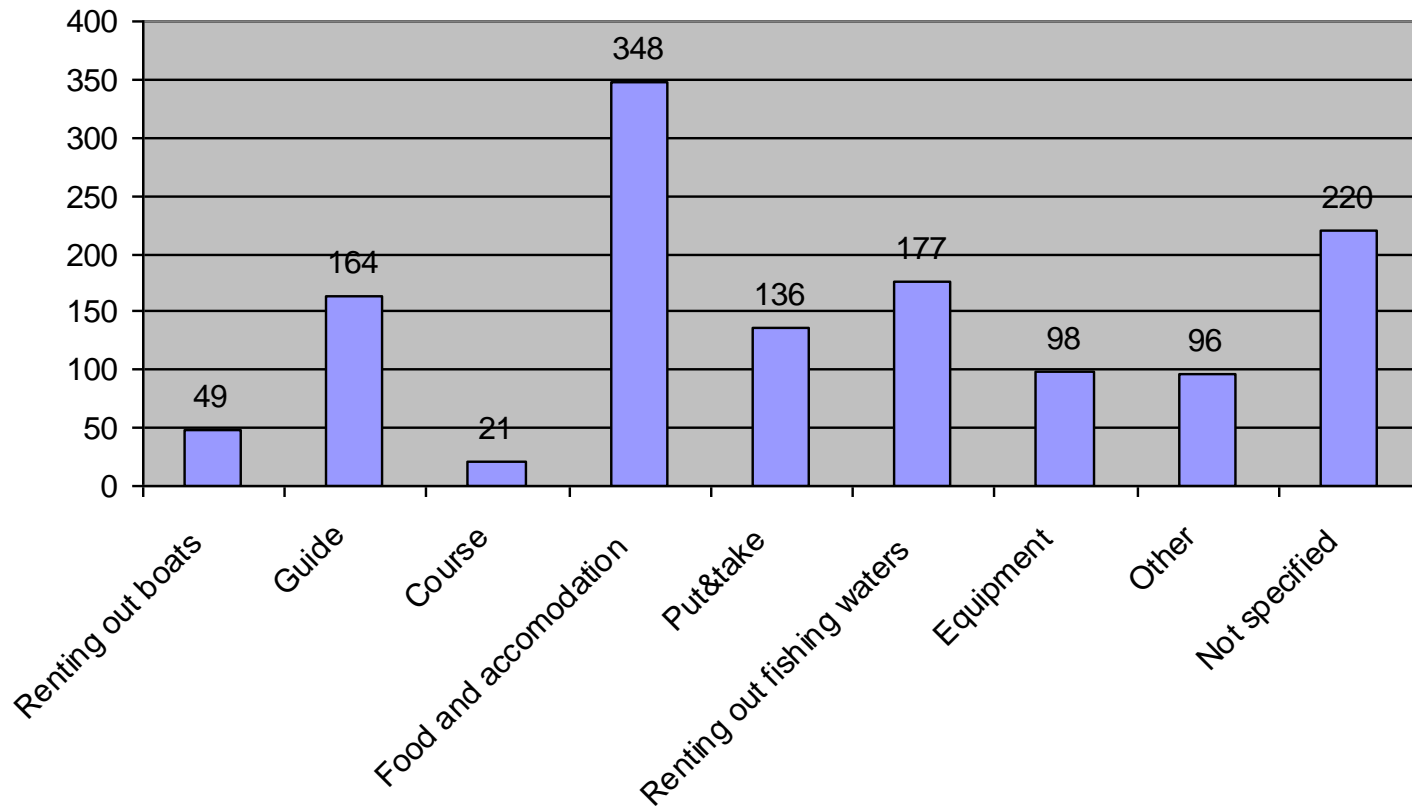
- Survey sent 5000 companies in 2007
- No public register for recreational fishing companies
- Sampling frame
 - About 2000 companies sampled from internet, county boards, tourist information, etc.
 - Statistics Sweden, company codes
 - Tourism
 - Sports
 - In total about 7200 companies in the frame
- Response rate: 70 %
- In total 731 respondents provided recreational fishing services

Estimated size of the sector

- Recreational fishing companies
 - Using sampling weights the total number of recreational fishing companies was estimated to 1310
 - 1000 full time employees
 - € 50 million in turnover
- Commercial fisheries for comparison
 - 1800 commercial fishermen
 - €110 million in landing value



Main activity (> 50 % of turnover), number of companies



Provided fishing days per species

- A fishing day is one day with at least some fishing performed by one customer
 - Guide boat with 10 customers = 10 fishing days
- Pike, perch, pikeperch fresh water 27 %
- Put and take 25 %
- Trout, char, grayling fresh water 25 %
- Salmon and sea trout fresh water 12 %
- A number of small fisheries
 - Cod and mackerel 2 %



Problems for the development of the company

- 15 potential problems were provided
- Scale 1-5
 - 1 = no problem
 - 5 = very severe problem

	Severe/very severe	"problem"
High labour costs	33 %	51 %
Lack of fish	21 %	50 %
Marketing	17 %	48 %
Bank loans	15 %	39 %

What kind of companies face what kind of problems?

- Econometric model explaining differences in how severe the problems are to companies with different characteristics



Salmonid fishing

- Focus on fishing for salmon, sea trout, trout, grayling, and char in fresh water
 - About 37 % of fishing days
 - Valuable sport fish
- ≥ 50 % of fishing days relate to salmonid fish
- 134 companies in the sample, representing 265 'real' companies



Salmonid fishing

- Services provided
 - Food and accommodation 57 %
 - Guiding 52 %
 - Other with large shares: Renting out boats, renting out waters
- 85 % of the companies provide multiple services within recreational fishing
- 63 % of the companies have activities outside the recreational fishing sector
 - Hotel
 - Other tourism
 - Hunting/nature guide

Regressions – dependent variables

- Lack of fish
 - Viewed as problem by 53% of the companies
- Marketing
 - Viewed as problem by 51% of the companies
- Labour cost
 - Viewed as problem by 70% of the companies
- Bank loans
 - Viewed as problem by 50% of the companies
- Scale 1-5, so we use an ordered logit model



Regressions – explanatory variables

- Type of services provided
 - Guide ≥ 1 % of turnover
 - Food and accommodation ≥ 1 %
 - Renting out privately owned waters ≥ 1 %
- Type of fishing
 - Salmon ≥ 1 % of fishing days
- Type of company
 - Size, large if turnover $\geq \text{€ } 100\,000$
 - Age, dummy for started in 2004-2006
 - Recreational fishing specialist
- Geographical location
 - North
 - West
- Entrepreneurial attitude
 - Planning to increase within next 3 years
 - Membership in organizations promoting the interests of the company



Lack of fish

	Coefficient	p-value
Type of services provided		
Guide	0.79	0.04
Renting out private waters	1.09	0.04
Food and accommodation	-0.28	0.51
Type of fishing		
Salmon	0.89	0.02
Type of company		
Large size	-0.23	0.57
Started in 2004-2006	-0.52	0.25
Recreational fishing specialist	0.01	0.98
Geographical location		
North	-1.01	0.06
West	0.10	0.88
Entrepreneurial attitude		
Increase	0.11	0.78
Membership in organizations	-0.19	0.61



Marketing

	Coefficient	p-value
Type of services provided		
Guide	0.32	0.38
Renting out private waters	0.39	0.49
Food and accommodation	0.23	0.55
Type of fishing		
Salmon	-0.31	0.42
Type of company		
Large size	-0.23	0.58
Started in 2004-2006	0.24	0.57
Recreational fishing specialist	-0.39	0.30
Geographical location		
North	-0.29	0.61
West	-0.10	0.88
Entrepreneurial attitude		
Increase	0.42	0.23
Membership in organizations	-0.38	0.28



Labour costs

	Coefficient	p-value
Type of services provided		
Guide	-0.07	0.84
Renting out private waters	0.24	0.64
Food and accommodation	-0.18	0.64
Type of fishing		
Salmon	0.02	0.96
Type of company		
Large size	0.09	0.81
Started in 2004-2006	0.24	0.18
Recreational fishing specialist	-1.11	0.01
Geographical location		
North	0.63	0.23
West	0.10	0.87
Entrepreneurial attitude		
Increase	0.99	0.00
Membership in organizations	-0.37	0.29



Bank loans

	Coefficient	p-value
Type of services provided		
Guide	0.62	0.10
Renting out private waters	1.19	0.03
Food and accommodation	0.45	0.28
Type of fishing		
Salmon	-0.42	0.30
Type of company		
Large size	-0.26	0.54
Started in 2004-2006	-1.25	0.00
Recreational fishing specialist	-0.69	0.09
Geographical location		
North	1.22	0.05
West	1.20	0.10
Entrepreneurial attitude		
Increase	0.65	0.09
Membership in organizations	0.08	0.83



Results and further research

- Low explanatory power
- Companies are similar with regard to fishing, but not with regard to services provided
- Include companies with no salmon fishing

