20 years of Nordic tourism economics research: A review and future research agenda

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Abstract

The number of economics-related articles in the Scandinavian Journal of Hospitality and Tourism (SJHT) has recently increased considerably. Despite this increase, the research efforts of Nordic economists and other managerial researchers on tourism issues have lagged behind in an international comparison. The recent increase in the number of economics-related publications in SJHT is due to better access to microdata (individual and firm data), the rapid development of statistical and econometric methods and the interest in the causes and effects of the tourism boom in the Nordic countries until recently. This article gives a brief review of the main topics of Nordic economic research that have been studied, as well as potential future research ideas (e.g. short term rentals, rising industry concentration, innovation and ICT) and data sources (big data, social media data, linked data at the micro level and register data) that can be developed and used for future studies. With the COVID-19 pandemic, general uncertainty and government intervention in the tourism sector will lead to a change in travel flows, calling for more quantitative studies. More research based on internationally comparable microdata for several Nordic countries will be particularly helpful.

Nordic and international research in tourism economics

The COVID-19 pandemic has affected the tourism sector hard, although the extent is unevenly distributed across tourism industries. Survey data from U.S. companies show that retail, arts and entertainment, personal services, food services and hospitality have been the most affected by the pandemic (Bartik et al., 2020). In the Nordic countries, the blow to the tourism industry is also hard with demand for inbound tourism paralyzing the industry for a long time. Regional airlines such as Scandinavian Airlines (SAS) and Norwegian Air Shuttle

have been struggling financially to stay in the air (Truxal, 2020). It seems only time will tell whether they can remain operational after the pandemic has finally ended.

In the current situation, the insights about tourism demand in the Nordic countries gained from research during the last decade are of limited applicability (see e.g., Khalik Salman, Arnesson, Sörensson, & Shukur, 2010; Nordström, 2004; Aalen, Iversen, & Jakobsen, 2019; Xie & Tveteraas, 2020a, 2020b). Since the pandemic has choked tourism demand due to travel restrictions, it means insights into the elasticities of tourism demand are of limited value. The pandemic has also triggered large-scale investments in implementation and training in the use of digital communication technologies. The wider use of digital communication technologies in all sectors of the economy as a viable alternative to traditional face-to-face meetings will have a far-ranging impact on travel and tourism consumption patterns. In this situation, tourism businesses must not only struggle to stay afloat financially, but many will also be forced to rethink their entire business models.

Tourism economists need to rethink their research agendas following the new challenges. For example, Sigala (2020) identifies the new economic research areas linked to COVID-19 including its effect on tourism demand, supply and industry structure, booking patterns, pricing strategies and the impact of public intervention on the industry. These effects are likely to be different in the different phases of the crisis divided into a reaction, recovery and restart phase (Sigala, 2020). Nevertheless, importance in this respect is the understanding of (new) tourists (motivation, decision making and behaviour).

In a Nordic context tourism as an economic activity had grown rapidly before the break of the COVID-19. The rapid tourism growth in Nordic countries can be seen from the hotel guest nights shown in Figure 1 and the increase in cruise ship activity (e.g., Skrede and Tveteraas, 2019). However, in contrast to the international trend described by Song et al. (2012), the stock of publications in tourism economics research in the Nordic countries was relatively low until recent years. This has led to a knowledge gap as the Nordic countries face similar challenges such as sustainability for nature-based tourism, high price level and dependence on air transport due to relative remoteness.

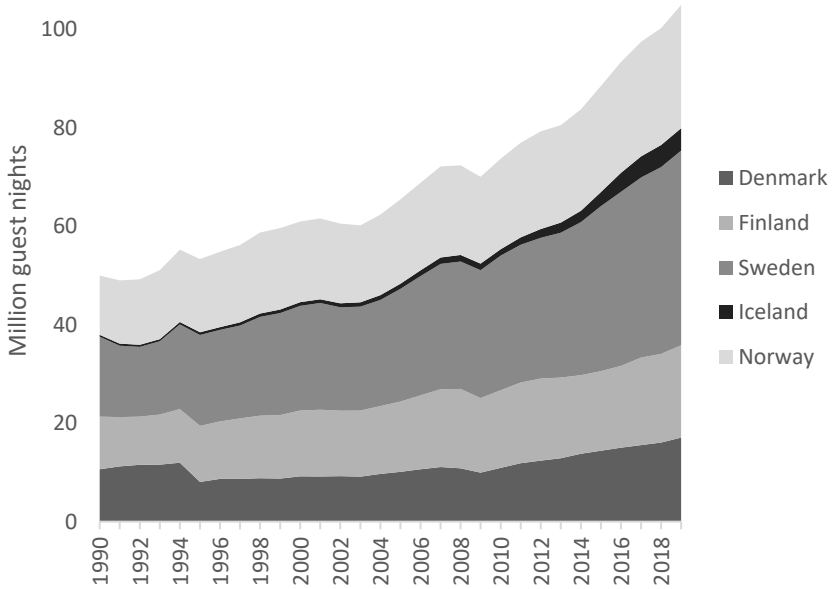

Figure 1. Hotel guest nights in Nordic countries (Source: Eurostat, Statistics Iceland, Statistics Norway).

In particular, the similarities between the Nordic countries in terms of climate, culture, nature, relative size, political and economic systems as well as the similar share of tourism in GDP make a strong case for tourism research dedicated to the Nordic context (Hall, Müller, & Saarinen, 2008; Mykletun & Haukeland, 2001). SJHT has played an important role in this respect. The number of studies on tourism economics published in SJHT has increased rapidly over the last five years, but still, compared to other disciplines, economists and managerial scholars have made sparse contributions to this journal since its foundation.

By the use of Google Scholar, we compare the number of economic articles published in SJHT and the number of hits for the word combination "tourism" and "economics" between 1991 and 2020 in Figure 2.[1] Compared to broader international research trends, contributions to SJHT by Nordic economists still appear to be 'behind the curve'. Articles in other journals

[1] The selection of articles is based on our own judgements of what can be counted as economics-related studies according to relatively mild criteria.

fitting these search words show signs of exponential growth far earlier than that which is observed in SJHT.

The relative late entry of Nordic economists and managerial scholars into tourism (Figure 2) may be due to research traditions in these countries. In the Nordic area, tourism as an object for scientific research first attracted the interest of human geographers and other social scientists. Economists, on the other hand may initially have shown a low interest because of the relatively low importance of the tourism sector. However, on the positive side, the tide has now turned, partly facilitated by SJHT which has published a growing number of articles on these topics.

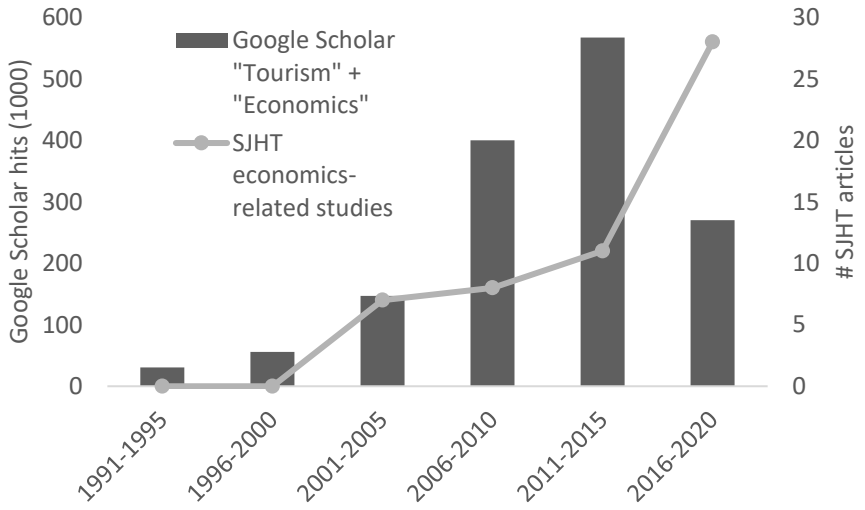

Figure 2. Number of articles published in SJHT linked to economics and the hits in Google Scholar when searching for keywords “tourism” + “economics”.

Although the growth rate of the international research output in tourism economics declined from 2011 to 2015 (as compared to 2006 to 2010), it remains strong. However, the upward trend seems to reverse in the period 2016 to (May) 2020. The turnaround in the last decade is deceptive in our view. Economists have not become less active internationally - on the contrary - they have merely diversified their research from ‘typical’ topics for economic studies like tourism demand, forecasting, and impact studies to other areas where “tourism” and “economics” are less frequently mentioned together. These topics include issues related

to housing rental markets including short term rentals (e.g., Balli et al., 2019; Falk, Larpin, & Scaglione, 2019; Ert & Fleischer, 2019), revenue management (e.g., Abrate & Viglia, 2016), hospitality operations (e.g., Andersson et al., 2012; Alemayehu & Tveteraas, 2019), use of social media and its impacts (e.g., Xiang, et al., 2017; Sigala, 2017; Yang, Park, & Hu, 2018), marketing (e.g., Xu, et al., 2016; Hernández, Kirilenko, & Stepchenkova, 2018), sustainability (e.g., Mathew & Sreejesh, 2017) and many others. These shifts in research topics not only signal that the contributions of economists in hospitality and tourism are becoming increasingly *diversified* and *multidisciplinary*, but also reflect the width of data used, including *microdata*, which has become increasingly available for quantitative analysis.

Current state of tourism economics research in a Nordic context

Present statistical and econometric software packages facilitate the application of both new and more advanced methods for the analysis of microdata. The statistical offices in the Nordic countries are world leaders in providing researchers with access to high quality microdata. They conduct travel surveys at the individual level and accommodation statistics at the establishment level. A good example of the studies based on such data is the analysis of domestic tourism demand of households using the Swedish travel and tourism survey (Coenen & Eekeren, 2003). In addition, data collected and processed by the national statistical offices like the community innovation survey (CIS) partly cover tourism firms and are increasingly used (Nordli, 2017, 2018).

Public weather stations (FMI, NMI and SMHI) regularly provide free access to their long-term weather data, where the Norwegian weather stations have the densest system in the world (#900). This allows analysis of weather data in combination with performance indicators of tourism establishments and firms. One example is the study by Falk and Vieru (2017), which investigates the relationship between snow depth and skier visits based on the data from Finnish ski lift operators. Another example is the investigation by Malasevska and Haugom (2019) who find that weather conditions significantly influence the total number of lift rides a skier takes in one day. The latter study also illustrates that tourism establishments and firms are increasingly willing to share their data with scholars. Winter tourism with skiing as a key activity is particularly relevant in a Nordic context, and studies other than those

mentioned above have also addressed handlers of this type of tourism demand (Kronenberg, et al., 2016; Falk and Vieru, 2017; Malaskeva, 2018a, 2018b).

Another topic of particular relevance for many Nordic destinations is nature tourism since it is the key pull factor that gets many tourists to visit the destinations. Economic studies on nature tourism have addressed topics such as demand for hiking (Wall-Reinius, & Bäck, 2011), economic impact of nature tourism (Rinne & Saastamoinen, 2005), mapping preferences for a nature visitor center (Lindberg, Veisten, & Halse, 2019) and tourists' willingness to pay for eco-label in whale watching (Lissner & Mayer, 2020).

Tourism events are also a popular topic where contributions have ranged from estimation of demand (Heldt & Mortazavi, 2016) and value of music festivals (Andersson, Armbrecht, & Lundberg, 2012) to methodological considerations (Dwyer, Jago, & Forsyth, 2016) and empirical applications of economic impact analysis (Kwiatkowski, Diedering, & Oklevik, 2018). At the same time, the Meetings, Incentives, Conferences, and Exhibition (MICE) segment has become increasingly important in the tourism sector. Zhang (2014) investigates the economic impact of MICE in Denmark. As a side note, the experience economy is a topic where SJHT studies have contributed. Although Andersson's (2007) study does incorporate economic theory in the analysis of the experience economy, most of these studies have the emphasis on the "experience".

SJHT has published a number of studies on tourism economics including tourism demand models for the Nordic countries (Khalik Salman et al., 2010; Nordström, 2004; Aalen, Iversen, & Jakobsen, 2019; Xie & Tveteraas, 2020a, 2020b) These studies investigate the effects of economic factors such as income, relative prices, exchange rates and advertising on inbound tourism demand mainly for Norway and Sweden. The number of tourist arrivals is based on national statistics of hotel and other accommodation overnight stays. Traditional tourism demand models as well as systems of equations such as Seemingly Unrelated Regressions (SUR) and Almost ideal demand system (AIDS) model are used in these studies. Other studies have investigated the globalisation of tourism in terms of foreign direct investments (FDI). A good example of these studies is the Kristjánsdóttir (2016a) study by employing Butler's model of tourism life cycle (Kristjánsdóttir, 2016b).

There are also several quantitative studies using non-regular independent surveys that continue to form the backbone of research related to tourism and hospitality. Typical research topics in this field are the determinants of travel behaviour and choice of destination (Thrane, 2008), modelling the length of stay (Prebensen, Altin, & Uysal, 2015) and characteristics of seasonal workers (Möller, Ericsson, & Overvåg, 2014). Econometric approaches used in these studies include, among others, the multinomial logit model, simple binary logit and probit models and count data models. However, there are often quality issues with stand-alone surveys, the initial sampling procedure may not fulfil the criteria of randomness, their response rates might be low and the distribution of non-responses is unknown. All these studies are also cross-sectional sample surveys. It would be desirable to conduct more repeated surveys to investigate changes over time. In the last ten years, there has been a trend towards more short-term travel, which is accompanied by a corresponding reduction in the length of stay (Gössling, Scott, & Hall, 2018).

There are also certain studies using non-official survey data to investigate the effects of tourism on the local or regional economy (Saarinen, 2003; Rinne & Saastamoinen, 2005; Fredman & Yuan, 2011; Andersson, Armbrecht, & Lundberg, 2012) and price difference and pricing strategies in restaurants (Røkenes, 2007; Heide et al., 2008). Dealing with working conditions and the labour market aspects have a long tradition in the Nordic countries. The research in SJHT reflects this focus with the investigation of wage determination (Brandt, 2018), the impact of employer size on wage formation (García-Pozo, Sánchez-Ollero, & Benavides-Chicón, 2012), the unemployment risks in hospitality (Thrane, 2007) and the impact on employment of economic restructuring (Lundmark, 2005).

Another interesting line of research with growing importance is loosely linked to behavioural economics and dominated by psychologists. These strands studies of the behaviour, beliefs and intentions of tourists and include studies like Doran, Hanss and Larsen (2017), Brun, Wolff and Larsen (2011), Larsen, Brun, Øgaard and Selstad (2011), Larsen (2011) as well as Wolff and Larsen (2017). The study by Larsen (2007) seems to be fundamental for this research field, which, among other things, is important for the analysis of how terror and risk perceptions influence the travel intentions of tourists.

The future of tourism economics research

It is noteworthy that few studies exploit the Nordic context to make cross-country comparative studies. Researchers could take advantage of harmonised (micro) data for several Nordic countries, such as the official accommodation statistics. Comparative studies across the Nordic countries would yield more insights than single-country analysis. One reason why few studies use micro data from the official statistics for tourism research is the cost to gain access to less aggregated data than is publicly provided. Another reason may be a lack of knowledge about what is actually available. This points to a large untapped research potential. A major advantage in the Nordic countries is the legal possibility to link microdata from several sources, which allows new and interesting research questions to be investigated. An example is to connect information on broadband internet supply with establishment data (see Akerman, Gaarder, & Mogstad, 2015 as an example for Norway). For labour intensive industries like tourism and hospitality, it is of particular interest to link employee data with data about their organisations (an example is the LISA - Longitudinal integrated database for health insurance and labour market studies - database for Sweden provided by SCB).

Another interesting avenue of future research is the analysis of the performance of hospitality and tourism establishments. The accommodation industry is highly competitive. Porter (2008) shows that accommodation and airline companies are among those with the lowest profit rates of all firms. Few firms are highly profitable while most firms make no profits at all. At the same time, superstar firms such as online travel agencies and booking companies make enormous profits due to their dominance of the distribution channels. Recently, in a seminal paper based on US establishment data in manufacturing, retail, wholesale, services, utilities and transportation and finance, Autor et al. (2020) find that industry revenues are increasingly concentrated to a small number of firms and that these industries are showing faster productivity growth. Current data from Nordic countries indicate that low profitability is still a key characteristic of tourism industries. To corroborate this, a

detailed comparison of key economic indicators for tourism sectors compared to the business sector as a whole (manufacturing and services) is provided in Appendix.[2]

The tourism industry in the Nordic countries is dominated by micro-enterprises with 9 or fewer employees. This group of enterprises is under-reported in surveys conducted by the statistical offices, which often have a minimum threshold of 10 or more employees. Firm and establishment data from the national statistical offices (e.g., Statistics Norway), administrative data covering the micro-enterprises (such as Bolagsverket and Brønnøysundsregisteret, the Swedish and Norwegian business registers, and balance sheets and profit and loss accounts or the LISA database) are a promising source of information for research on the performance, concentration and competitiveness of tourism establishments as well as effects of investment subsidies and other support measures. Although there are many studies that examine travel behaviour at the level of individuals or destinations, few studies focus on the tourism establishment.

Another promising topic is the spatial patterns of short-term rentals via online platforms, their impact on the hotel market and the implications for short-term rental regulations. Still, there are also few studies using Airdna data containing detailed information on the Airbnb listing despite their availability.

The COVID-19 pandemic leads to changes in travel behaviour, at least in the short term (Sigala, 2020). This may differently affect both rural destinations with a large space for visitors and urban destinations with a high density of visitors. Thus, researchers should preferably use more fine-grained and geocoded data at the establishment and individual level. Tourism and hospitality researchers should also learn from other areas such as economics, business, information technology, statistics and geography. For instance, geographic information systems are now standard, and the research potential has not yet been fully exploited in tourism economics. Social media data is an extensive source of information that can be quantified. For example, big data is currently being used to forecast both hospitality

[2] The average profitability (measured as the share of gross operating surplus in turnover) in hotels and similar establishments, food and beverage service activities and air transport is considerably lower than the average of the service industries (between 18 and 33 per cent). Evidence is based on the structural business statistics for Denmark, Finland, Norway and Sweden for the year 2017. Similarly, labour productivity (value added per employee) in food and beverage services and hotels is one of the lowest among all service industries (between 33 and 48 per cent lower than average).

(Antonio, de Almeida, & Nunes, 2019) and tourism demand (Zhang, Muskat, & Law, 2020). This appears to be another fertile ground for hospitality and tourism research. The paradigm shift in economics implies a strong emphasis on identifying causal effects rather than statistical correlations (Angrist & Pischke, 2008).

Conclusion

There is a growing number of articles in the SJHT in the field of tourism economics trailing the broader international publication trend. There are also increasing interdisciplinary contributions that address social challenges in general (such as global warming, migration, sustainability) in this body of research. Nevertheless, it would be welcome if more economists would contribute to SJHT. With globalization and growth in travel and tourism, this sector has become inherently complex, dealing with issues that are not country specific, thus calling for additional multidisciplinary research efforts. Furthermore, given the recent development in the world, the challenges for tourism and hospitality will be enormous in the coming years, where the debate on overtourism, social impact of tourism and sustainability is likely to re-emerge, but possibly in another guise than before (e.g., see Oklevik et al., 2019). Economists, with their expertise in quantitative modelling and economic theory, can provide useful perspectives for this future research. In particular, economists can contribute greatly to address these emerging issues in the tourism sector and support evidence-based economic policies and government actions.

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Appendix

Key economic indicators of the various tourism industries in the Nordic countries show some common patterns but also some striking differences. Labour productivity and employment dynamics vary considerably between the various subindustries and the countries. Employment growth between 2010 and 2017 is highest in hotel, restaurant and beverage services and in the rental of sports and leisure equipment. Gross wages in the hotel and restaurant sector are between 30 and 50 percent lower than in the economy as a whole. In many sub-sectors the profitability rate is significantly below average (tour operators, travel agencies, food and beverages).

Table A1. Key indicators of selected tourism industries

		Air transport				
		DK	FI	SE	IS	NO
Number of firms	2017	78	79	313	37	99
Employees in full time equivalent units	2017	4856	5606	4799	3609	5467
Employment growth	2010-17	0.4	9.5	-1.9		-0.3
Employees FTE per firm	2017	62.3	71.0	15.3	97.5	55.2
Labour productivity	2017	163.7	146.0	126.6	140.6	107.6
Labour productivity growth	2010-17	5.7	19.7	8.0		0.9
Gross operating surplus/turnover in %	2017	10.1	10.7	6.7	5.8	1.2
Personnel costs per employee in 1000 euro	2017	95.2	84.7	94.3	99.6	79.9
Investment/value added at factors cost in %	2017	32.5	53.0	58.1	:	17.7
		Hotels and similar accommodation				
		DK	FI	SE	IS	NO
Number of firms	2017	864	766	3051	660	1232
Employees in full time equivalent units	2017	11996	7105	32946	5168	18287
Employment growth	2010-17	1.6	2.4	3.9		1.9
Employees FTE per firm	2017	13.9	9.3	10.8	7.8	14.8
Labour productivity	2017	70.7	58.0	59.2	72.1	63.0
Labour productivity growth	2010-17	3.9	4.1	2.5		0.2
Gross operating surplus/turnover in %	2017	11.1	10.0	8.9	14.1	4.5
Personnel costs per employee in 1000 euro	2017	30.6	32.7	39.8	44.0	32.7
Investment/value added at factors cost in %	2017	23.1	17.7	16.2	:	12.5
		Food and beverage service activities				
		DK	FI	SE	IS	NO
Number of firms	2017	12934	10099	27363	834	8987
Employees in full time equivalent units	2017	47276	46255	108290	7227	50706
Employment growth	2010-17	5.2	2.8	5.5		7.4
Employees FTE per firm	2017	3.7	4.6	4.0	8.7	5.6
Labour productivity	2017	52.3	43.4	45.2	50.9	48.9
Labour productivity growth	2010-17	0.1	1.4	2.3		-3.0
Gross operating surplus/turnover in %	2017	7.3	8.0	10.1	6.0	7.0
Personnel costs per employee in 1000 euro	2017	20.2	27.3	31.6	31.4	25.6
Investment/value added at factors cost in %	2017	7.2	6.7	8.7		5.6

		Travel agency activities				
		DK	FI	SE	IS	NO
Number of firms	2017	200	237	770	158	326
Employees in full time equivalent units	2017	1965	109	4000	1113	1748
Employment growth	2010-17	3.0	-6.6	-2.1		-2.0
Employees FTE per firm	2017	9.8	4.6	5.2	7.0	5.4
Labour productivity	2017	69.4	52.7	84.3	74.7	86.3
Labour productivity growth	2010-17	3.1	2.8	3.9		-1.7
Gross operating surplus/turnover in %	2017	2.0	1.1	4.2	1.5	1.0
Personnel costs per employee in 1000 euro	2017	47.7	41.4	54.7	54.5	54.8
Investment/value added at factors cost in %	2017	1.6	2.0	2.8		1.4
		Tour operator activities				
	0	DK	FI	SE	IS	NO
Number of firms	2017	258	155	1355	340	499
Employees in full time equivalent units	2017	2071	672	3991	1484	1170
Employment growth	2010-17	-1.7	-3.3	1.0		2.5
Employees FTE per firm	2017	8.0	4.3	2.9	4.4	2.3
Labour productivity	2017	74.6	86.5	88.3	103.2	118.9
Labour productivity growth	2010-17	0.1	3.4	2.1		0.0
Gross operating surplus/turnover in %	2017	1.8	3.3	3.2	22.5	4.4
Personnel costs per employee in 1000 euro	2017	52.0	38.0	53.9	51.3	50.7
Investment/value added at factors cost in %	2017	4.4	3.2	5.8		2.7
		Renting and leasing of recreational and sports goods				
		DK	FI	SE	IS	NO
Number of firms	2017	134	80	473	14	208
Employees in full time equivalent units	2017	100	99	270	9	102
Employment growth	2010-17	7.3	10.6	-1.4		10.1
Employees FTE per firm	2017	0.7	1.2	0.6	0.6	0.5
Labour productivity	2017	74.0	53.5	81.9	33.3	86.3
Labour productivity growth	2010-17	-1.1	1.9	2.9		4.0
Gross operating surplus/turnover in %	2017	17.5	11.4	18.2	10.8	10.5
Personnel costs per employee in 1000 euro	2017	22.0	25.3	39.3	19.8	28.3
Investment/value added at factors cost in %	2017	49.6	13.7	44.2		111.9
		Organisation of conventions and trade shows				
		DK	FI	SE	IS	NO
Number of firms	2017	238	243	1357	25	243
Employees in full time equivalent units	2017	1511	810	2719	16	662
Employment growth	2010-17	4.4	-1.0	-1.0		2.9
Employees FTE per firm	2017	6.3	3.3	2.0	0.6	2.7
Labour productivity	2017	74.3	84.3	69.8	93.8	132.5
Labour productivity growth	2010-17	-1.7	2.2	2.1		-0.1
Gross operating surplus/turnover in %	2017	6.8	10.3	6.5	8.0	8.7
Personnel costs per employee in 1000 euro	2017	34.6	47.5	49.9	54.7	61.7
Investment/value added at factors cost in %	2017	15.3	10.8	9.2		5.6
		Total business economy; repair of computers. personal and household goods; except financial and insurance activities				
		DK	FI	SE	IS	NO
Number of firms	2017	223360	230879	712144	28563	296346
Employees in full time equivalent units	2017	1253013	1182124	2513202		1184391
Employment growth	2010-17	1.4	0.3	1.9		0.9

Employees FTE per firm	2017	5.6	5.1	3.5		4.0
Labour productivity	2017	119.2	86.1	93.3		160.2
Labour productivity growth	2010-17	2.3	2.3	1.5		-0.3
Gross operating surplus/turnover in %	2017	11.8	10.5	9.7	11.9	17.5
Personnel costs per employee in 1000 euro	2017	53.0	45.1	56.9	58.8	60.0
Investment/value added at factors cost in %	2017	17.1	17.7	21.1		20.1

Source: Annual detailed enterprise statistics for services (NACE Rev. 2 H-N and S95) [sbs_na_1a_se_r2]