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Economic Effects of Tourism in Þingeyjarsýslur

Analysis at the sub-national level in Iceland

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FOREWORD

Statistical data is essential when it comes to strategic planning, decision making and implementation of policies in tourism, as in any other activity or industry. The quality and interpretation of this data directly impacts the efficiency of such work. The need for more and improved statistical data on tourism has arisen worldwide with the rapid growth of the tourism industry and much discussion has taken place in Iceland on that subject. Progress has been made with the publication of Tourism Satellite Accounts and the creation of the Tourism Task Force, but there is still much work to be done. This report focuses on regional tourism statistical data gathering and an analysis of the economic impacts of tourism regionally in Iceland. The regional data is compiled from national data which adheres to international standards where possible, but most of the data here presented is gathered from *in situ* research.

1 INTRODUCTION

Tourism is an important contributor to the Icelandic economy. In 2013, the tourism industry's direct contribution to the country's GDP was estimated to be 87,3 billion ISK, resulting in a share of 4,6%.¹ This demonstrates a growth of 55% from the year 2009 in nominal terms. At the same time, the nominal increase rate of Iceland's GDP was 18,6% (Statistics Iceland, 2015c). The tourism industry directly employed 9.500 people in 2013, which accounts for about 5,5% of the country's total workforce (World Travel & Tourism Council, 2014).

Tourism is generally dependent on the national system of transport and the destinations are developed around place specific natural and/or cultural attractions. It can therefore be unevenly distributed within the national territory. Consequently, it can generate additional demand at different territorial levels which needs to be measured using reliable and appropriate frameworks in order to ensure rational and prosperous decision making by public and private stakeholders (Huijbens & Bjarnason, 2014; United Nations, 2010b). With the enlarged scope of tourism worldwide, the need for detailed and improved statistics of the industry has risen. Regional tourism authorities have shown a growing interest in the development of regional statistics as a means to provide valuable indicators for tourism enterprises and organisations in finding potential business opportunities, evaluating the intensity and size of tourism businesses and measuring the level of interconnection between private and public regional tourism networks and clusters (United Nations, 2010a).

Iceland is a small country in a European context and has limited obligations to compute regional statistics and build regional accounts² (EFTA, 2015). However, in order to develop a strong and well-functioning tourism industry, statistical analysis by regions is indispensable. The nature and scope of tourism has to be understood in order to rationalise decision making and fulfil the objectives of the parliamentary resolution on tourism for 2011-2020, which i.a. aims at increasing the profitability of the sector by reducing seasonal fluctuations and lengthening the tourist season (Icelandic Tourist Board, 2011).

With the purpose of evaluating tourism's regional economic effects in Iceland, a study has been carried out by the Icelandic Tourism Research Centre in collaboration with the University of Iceland's Research Centre in Húsavík and the Húsavík Academic Centre during

¹ The aggregate of Tourism Direct Gross Domestic Product (TDGDP).

² According to the EEA agreement, Iceland and Norway are not bound by the regulation on regional accounts as the EU member states (EFTA, 2015).

the period of 2012-2015. A report presenting the methodology of the study was published in 2013 (Rögnvaldsdóttir, 2013). Visitor survey results were published in 2014 (Rögnvaldsdóttir, 2014b) and a report on regional tourism data availability in Iceland was published in 2014 (Rögnvaldsdóttir, 2014a). The field of study is the Þingeyjarsýslur counties and the year 2013 is the focus of the analysis, which is also the most recent year for which data has been compiled in the Icelandic TSA. Other data, such as tourist numbers and overnight stays, is more recent. The method used in this study is retrieved as much as possible from the principles of the *Tourism Satellite Account: Recommended Methodological Framework 2008* (TSA:RMF 2008), which is generally applied for a country as a whole (national level). The project was funded with support from the Ministry of Education, Science and Culture and the Northeast Iceland Growth Agreement.

The main focus of the study is on the direct regional effects of tourism. However, special consideration is given to the indirect and induced effects with the aim of evaluating if such estimations are feasible at the regional level.

The methodology of the study is described in chapter two as well as the study area and key concepts. Chapter three discusses non-monetary indicators, focusing mainly on tourism numbers and overnight stays in the region. In chapter four, the direct effects of tourism in Þingeyjarsýslur are discussed and the total turnover by tourism industries and tourism consumption in the region is presented. Chapter five discusses other estimations of the study, such as the indirect effects and municipal revenues from tourism in the region, and it is followed by a conclusion and a discussion of the study's limitations in chapters six and seven.

The main results of the study can be summarized as follows:

- The total turnover by detailed industries directly related to tourism in Þingeyjarsýslur was 8.335 m. ISK in the year 2013, whereof total tourism turnover was 4.672 m. ISK.
- The total number of Annual Work Units in tourism in Þingeyjarsýslur was 313 in 2013. Full Time Equivalents during the summer were 749 and 151 during the winter. The total tourism salary cost in the region accounted for 1.436 m. ISK in 2013.
- The number of visitors to Þingeyjarsýslur in 2013 is estimated to have been 312.000³.
- Total overnight stays in the region are estimated to have been 292.359⁴ in 2013.

³ Domestic and inbound visitors.

⁴ Domestic and inbound tourists in all types of accommodation.

2 KEY CONCEPTS USED, METHODOLOGY AND STUDY AREA

Tourism is primarily a demand-defined industry unlike most output-defined industries in the national accounts such as fisheries, agriculture and manufacturing. The scope of the tourism industry is in fact determined by its consumers at the time of consumption (Smeral, 2006). Expenditures on travel and tourism cut across many types of industries that do not fit neatly into the Industrial Classification System (Mak, 2004). Tourism economic statistics are therefore hidden in various macro-economic national accounts frameworks like current accounts or private consumption. In order to unveil these different tourism components for analysis and to foster international comparability, the World Tourism Organization (UNWTO) developed successive sets of international recommendations on tourism statistics; *International Recommendations for Tourism Statistics 2008 (IRTS 2008)* and *Tourism Satellite Account: Recommended Methodological Framework 2008 (TSA:RMF 2008)*. These publications provide the basic definitions and concepts regarding the diverse aspects of tourism as well as a conceptual framework designed for the computation of the importance of tourism from a macroeconomic perspective (Eurostat, n.d.c.; OECD, 2010; United Nations, 2010a, 2010b).

2.1 TOURISM SATELLITE ACCOUNT (TSA)

TSA concentrates on the description and dimension of tourism in its various components (inbound, outbound and domestic) (OECD, 2010). It measures the direct economic contributions of tourism consumption to a national economy based on a set of ten interrelated tables which are consistent with the general Supply and Use Tables (SUT) established by countries at the national level to describe the general economic balance of goods and services and the production accounts of the producers following the System of National Accounts (Frechtling, 2010; United Nations, 2010b).

The purpose of a Tourism Satellite Account is to analyse in detail all the aspects of demand for goods and services associated with the activity of visitors; to observe the operational interface with the supply of such goods and services within the economy; and to describe how this supply interacts with other economic activities (United Nations, 2010b, p. iii).

2.1.1 Concepts and classifications

The construction of TSA employs a number of tourism concepts. A brief definition of each concept is provided as follows:

- (a) *Tourism* can be regarded as a social, cultural and economic phenomenon associated with the movement of people outside their usual environment. Tourism therefore refers to the activity of visitors (OECD, 2010).
- (b) “*Travel* refers to the activity of travellers. A *traveller* is someone who moves between different geographic locations for any purpose and any duration. Travel within a country by residents is called *domestic travel*. Travel to a country by non-residents is called *inbound travel*, whereas travel outside a country by residents is called *outbound travel*” (United Nations, 2010a, p. 9).
- (c) “A *visitor* is a traveller taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. These trips taken by visitors qualify as tourism trips” (United Nations, 2010a, p. 10).
- (d) “A visitor (domestic, inbound or outbound) is classified as a *tourist* (or overnight visitor) if his/her trip includes an overnight stay, or as a *same-day visitor* (or excursionist) otherwise” (United Nations, 2010a, p. 10).

Figure 1 demonstrates the classification of inbound travellers to a country. According to TSA principles, only the travellers in the blue boxes in figure 1 count as visitors to a country where they do not reside. There are miscellaneous reasons for the red boxes to be excluded, such as travellers being considered as residents of the extraterritorial area that is part of the territory of the country they represent, or the country of residence is considered to be the usual residence of the traveller (United Nations, 2010a).

- (e) *Tourism industries* are defined as “the activities that typically produce tourism characteristic products” (table 10) (United Nations, 2010a, p. 40).
- (f) *Tourism industries* are also defined in IRTS 2008 as the “grouping of those establishments whose main activity is the same tourism characteristic activity. In supply-side statistics, establishments are classified according to their main activity, which is determined by the activity that generates the most value added” (United Nations, 2010b, p. 25).

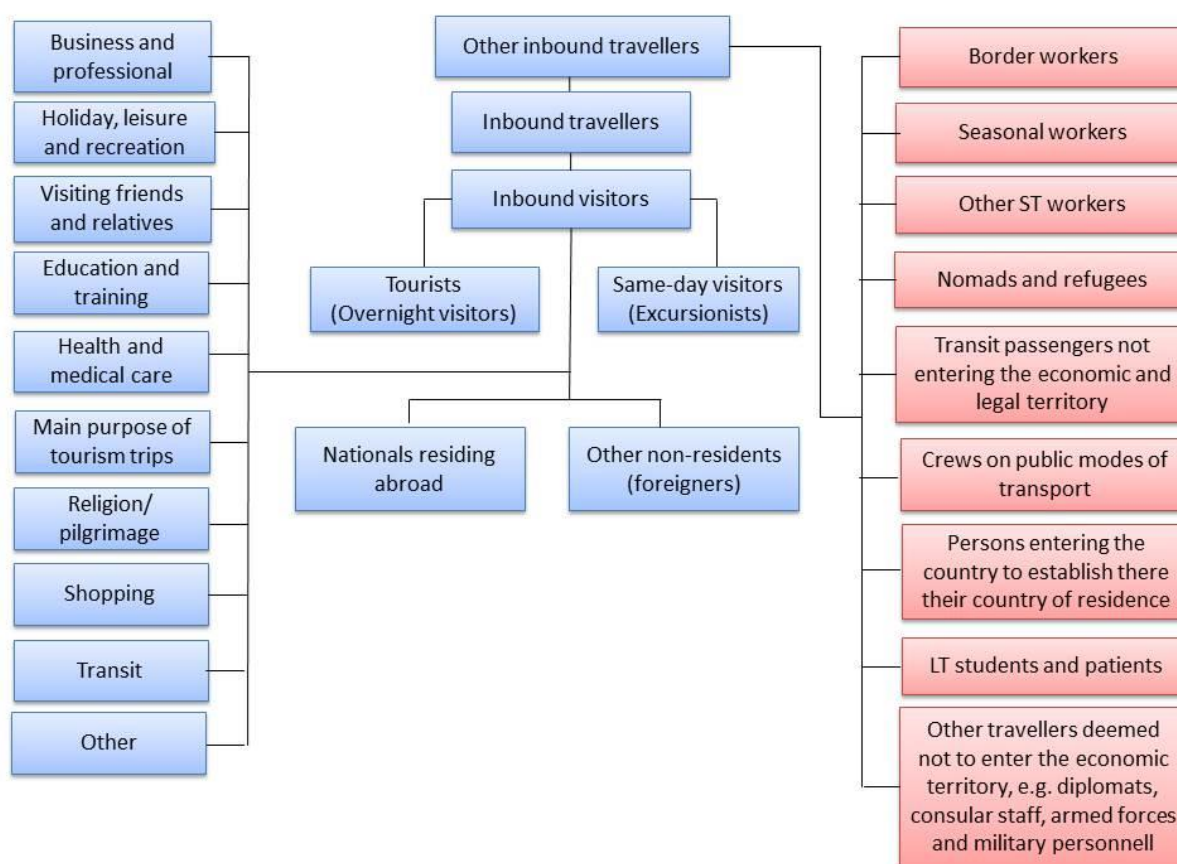


Figure 1. Classification of inbound travellers

Source: United Nations (2010a, p. 17).

- (g) An *establishment* is “an enterprise, or part of an enterprise, that is situated in a single location and in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added” (United Nations, 2010b, p. 25).
- (h) *Tourism ratio* is “the ratio between the total value of tourism share and total value of the corresponding variable in the Tourism Satellite Account expressed in percentage form” (United Nations, 2010b, p. 80).
- (i) *Tourism characteristic activities* generally produce tourism characteristic products.
- (j) *Tourism characteristic products* are those that fulfil one or both of the following criteria:
- (j.1) Tourism expenditure on the product should represent a significant share of total tourism expenditure (share-of-expenditure/demand condition);

(j.2) Tourism expenditure on the product should represent a significant share of the supply of the product in the economy (share-of-supply condition). This criterion implies that the supply of a tourism characteristic product would cease to exist in meaningful quantity in the absence of visitors (United Nations, 2010a, p. 40).

As the industrial origin of a product (in Iceland the ISAT 2008 industry that produces it) is not a measurement for the accumulation of products within a similar Central Product Classification (CPC)⁵ category, there is no exact one-to-one relationship between products and the industries producing them as their primary output.

Table 1 demonstrates the typology of tourism characteristic consumption products and activities, separately grouped in the 12 corresponding categories to be used in the Tourism Satellite Account tables (United Nations, 2010a-b).

Table 1. List of tourism characteristic consumption products and tourism characteristic activities (tourism industries)

Source: United Nations (2010b, p. 25).

	Tourism products	Tourism activities
1	Accommodation services for visitors	Accommodation for visitors
2	Food- and beverage-serving services	Food- and beverage-servicing activities
3	Railway passenger transport services	Railway passenger transport
4	Road passenger transport services	Road passenger transport
5	Water passenger transport services	Water passenger transport
6	Air passenger transport services	Air passenger transport
7	Transport equipment rental services	Transport equipment rental
8	Travel agencies and other reservation services	Travel agencies and other reservation services activities
9	Cultural services	Cultural activities
10	Sports and recreational services	Sports and recreational activities
11	Country-specific tourism characteristic goods	Retail trade of country-specific tourism characteristic goods
12	Country-specific tourism characteristic services	Other country-specific tourism characteristic activities

⁵ The Central Product Classification (CPC) is an internationally approved product classification, based on the physical characteristics of goods or on the nature of the services provided. It classifies goods and services as a result of production in the economy and is used as a standard for organizing and analysing data on industrial production. Each activity of the International Standard Industrial Classification (ISIC) is defined in such a way that it only produces one type of product (OECD, n.d.; United Nations, 2015).

Categories 1 to 10 in table 1 encompass the core for international comparison in terms of International Standard Industry Classification (ISIC) for activities (equivalent to ISAT2008 in Iceland) and CPC subclasses for products. Categories 11-12 are country specific, whereas category 11 includes tourism characteristic goods for products and the equivalent retail trade activities for activities. Category 12 refers to country-specific tourism characteristic services and other country-specific tourism characteristic activities (United Nations, 2010b).

Each enterprise in Iceland is classified with a five digit classification code which enables industry categorisation based on the European Union's NACE Rev2. The system consists of 664 industries and facilitates demarcation between the different sectors as well as the aggregation of related sectors. As tourism is not specially categorized in ISAT 2008, the codes of all the tourism related industries are listed according to IRTS 2008, enabling the coverage of the tourism industry population (Statistics Iceland, n.d.c.). Attention must be paid to the fact that enterprise lists by regions inevitably include biases in the case of branches with headquarters elsewhere. The ISAT numbers of the tourism activities in table 1 have been identified in accordance with the classifications proposed by UNWTO. Appendix 2 contains a list of tourism industries that was used in the last TSA compilation for Iceland (Icelandic Tourism Research Centre, 2015a; Statistics Iceland, n.d.e.).

2.1.2 Tourism demand

As tourism is a demand-based industry, reliable demand data is essential for the development of TSA. There are two crucial elements under the TSA demand side which need to be calculated; *tourism expenditure* and *tourism consumption*. The TSA:RMF 2008 makes a distinction between tourism expenditure and tourism consumption. As already mentioned, the former relates to monetary transactions whereas the latter also takes into account other transactions such as vacation in second homes, tourism social transfers in kind and other imputed consumption. Tourism expenditure is more immediately assessable while tourism consumption is more complete (OECD, 2010; United Nations, 2010b).

Tourism expenditure is defined as “the amount paid for the acquisition of consumption goods and services, as well as valuables, for own use or to give away, for and during tourism trips. It includes expenditures by visitors themselves, as well as expenses that are paid for or reimbursed by others” (United Nations, 2010a, p. 31). There are several types of tourism expenditure:

- (a) **Domestic tourism expenditure** is the tourism expenditure of a resident visitor within the economy of reference;
- (b) **Inbound tourism expenditure** is the tourism expenditure of a non-resident visitor within the economy of reference;
- (c) **Outbound tourism expenditure** is the tourism expenditure of a resident visitor outside the economy of reference (United Nations, 2010a, p. 34).

Furthermore,

- (a) **Internal tourism expenditure** comprises all tourism expenditure of visitors, both resident and non-resident, within the economy of reference. It is the sum of domestic tourism expenditure and inbound tourism expenditure. It includes acquisition of goods and services imported into the country of reference and sold to visitors. This indicator provides the most comprehensive measurement of tourism expenditure in the economy of reference;
- (b) **National tourism expenditure** comprises all tourism expenditure of resident visitors within and outside the economy of reference. It is the sum of domestic tourism expenditure and outbound tourism expenditure (United Nations, 2010a, p. 34).

The TSA relates tourism demand to the tourism supply in the economy. In order to do that, information needs to be collected not only on the total value of tourism expenditure, but also on the components of this aggregate. This is done by asking visitors to group their expenditures according to their purpose, and the most commonly used categories are the following:

- i. Package travel, package holidays and package tours
- ii. Accommodation
- iii. Food and drink
- iv. Local transport
- v. International transport
- vi. Recreation, culture and sporting activities
- vii. Shopping
- viii. Others

(United Nations, 2010a, p. 35)

Data collection on expenditure may vary between countries due to different levels of resources and statistical availability. TSA:RMF 2008 recommend that countries use visitor surveys as well as tourism-specific household expenditure surveys to collect this data. Visitor surveys should be conducted at borders as well as at key destinations or places visited (United Nations, 2010b).

2.1.3 Tourism supply

Three different indicators need to be compiled in order to describe the tourism supply in an economy according to TSA. These indicators differ somewhat and complement each other. They are the following: Gross value added of the tourism industries (GVATI), Tourism direct gross domestic product (TDGDP) and Tourism direct gross value added (TDGVA). Each of them will be presented below:

Gross value added of the tourism industries (GVATI) is “the value of a productive activity’s output minus the value of inputs purchased from other productive activities for the collection of industries whose main activities are tourism characteristic activities” (United Nations, 2010b, p. 30, p. 34). GVATI is a measure of the supply side of tourism, but as it lacks the direct link to tourism consumption it cannot be accepted as a measure of the importance of tourism for supply. The only indicators strictly embodying tourism supply are therefore TDGVA and TDGDP from a TSA perspective (United Nations, 2010b).

Tourism direct gross value added (TDGVA) is “the part of gross value added generated by tourism industries and other industries of the economy that directly serve visitors in response to internal tourism consumption” (United Nations, 2010b, p. 80). Tourism Satellite Account measures only the value added resulting from the consumption of visitors and excludes the indirect and induced effects of tourism (United Nations, 2010b).

Tourism direct gross domestic product (TDGDP) is “the sum of the part of gross value added (at basic prices) generated by all industries in response to internal tourism consumption plus the amount of net taxes on products and imports included within the value of this expenditure at purchasers’ prices” (United Nations, 2010b, p. 80).

TDGVA and TDGDP express the scope of the direct economic contribution of tourism in the economy of reference in a similar way to GVA of an industry. However, they do not refer to tourism as an industry comparable to other industries in the *System of National Accounts 2008*. These are indicators, originating from a reconciliation of tourism consumption and

supply, based on numerous assumptions and implicit modelling procedures, and therefore special caution must be taken when using these aggregates (United Nations, 2010b).

A limitation of the TSA is that the accounts are mainly descriptive in nature and do not include calculations on the indirect and induced effects of tourism on the economy. Other methods have to be used for that, such as Input-Output tables which are derived from the SUTs (United Nations, 2010b). The I-O tables show how much of each product is used as input for the production of other products at the same time as they demonstrate how much of each product is consumed by different user categories. This results in a map of the inter-industry relations in the economy (Eurostat, n.d.b.).

2.2 THE NORDIC MODEL

Applying the TSA methodology can be complicated when measuring the regional economic effects of tourism in rural regions such as those of the Nordic periphery where lack of data is persistent. In the early 1980s, a new method to assess the regional economic impacts of tourism in the Nordic countries was introduced, the so-called *Nordic Model* (Paaanen, 1993, as cited in Huhtala, 2007). It consisted of two main parts; the income model and the expenditure model. The income model studies the supply side of tourism whereas the expenditure model is used for the demand side (Kauppila & Karjalainen, 2012; Saarinen, 2003). Usually, only one approach is used in each research. The first one uses questionnaires or interviews for local companies in order to examine their annual turnover and to measure the proportion of this turnover deriving from tourism. In addition, employment numbers are examined, as are salary costs, and companies' purchases. When measuring the direct effects of tourism on income, the contributions from the local demand are subtracted from the turnover whereas the indirect effects are calculated from the companies' purchases in the region. The latter approach uses tourist expenditure surveys, requiring an assessment made on the total extent of tourism in the region (Saarinen, 2003). This model has been used both at the larger regional and local municipality level in Finland, but to a lesser extent in other Nordic countries (Müller & Jansson, 2007). This model was partly taken into account when implementing the research methodology in this study.

2.3 REGIONAL ANALYSIS

The measurement of tourism economic impact at the national level is a complex process even though it follows the standardized methodological framework of TSA. The measurement of regional tourism economic effects is even more demanding when it is based on the same data sources as the national figures. No conceptual framework exists for the TSA on a subnational level equivalent to the System of National Accounts. This is both due to observational difficulties as well as problems with applying the national accounting concepts on the regional level. In order to construct a regional tourism satellite account, fully developed supply and use tables are necessary on the regional level, as are input output tables (Office for National Statistics, 2014). These are not available in Iceland. The lack of a coherent and managed regional collection framework for tourism statistics has also restricted regional data production in Iceland.

The main restrictions for identifying tourism activity with the system used in the making of the System of National Accounts and the TSA are the following:

- Some tourism variables are not transferable from the national level to a region.
- Not all activities can be regionalised, such as travel agency services and central government services.
- General lack of instruments to monitor the flow of visitors in and out of a region (United Nations, 2010b).

TSA:RMF 2008 recommends two main approaches to adapt TSA at the subnational level.

- The *interregional approach* is conducted in the same way in each region and is directly linked to the System of National Accounts. It relies on the availability of uniform tourism information in each region for each of the TSA tables and is often called the “top-down” approach.
- The *regional approach* has to be specially developed in each region where specific situations and differentials are identified. This approach is called the “bottom-up” approach and is likely to generate a set of regional evaluations that add up to greater totals than the national TSA. It can only fairly be used for comparison between regions (United Nations, 2010b).

The lack of uniform tourism information and the lack of regional data in Iceland excludes the interregional approach. Therefore, calculations in Þingeyjarsýslur for the reference year of this study will be based on the regional approach.

2.3.1 Territorial units in Iceland

The European Union has introduced a legal framework for the territorial division of EU, EFTA and candidate countries in order to harmonise the collection, transmission and publication of national and community statistics. The Nomenclature of Units for Territorial Statistics (NUTS) is a geocode standard for referencing the subdivisions of countries for statistical purposes. If sub-national statistics are to be comparable, the geographical areas need to be of similar size in population terms. Their political, institutional and administrative arrangements should also be defined (European Union, n.d.). A hierarchy of three NUTS levels is established, followed by two levels of local administrative units (LAUs). The LAUs are generally the lowest administrative division of a country and can also designate municipalities, communes, cities and counties (Eurostat, n.d.a.). The statistical territories in Iceland are classified as in table 2.

Table 2. NUTS and LAUs in Iceland

Source: Association of Local Municipalities in Iceland (n.d.b.); European Union (n.d.); Harðarson and Sindradóttir (2012).

Level	Iceland	Number of entities
NUTS1	IS0 Iceland	1
NUTS2	IS00 Iceland	1
NUTS3	IS001 Capital Region IS002 Rest of country	2
LAU1	Regions in Iceland	8
LAU2	Municipalities in Iceland	74

Table 3 presents the population and geographical size of each LAU1 territory unit as of 1 January 2015. As can be seen, 64% of all inhabitants in Iceland live in the capital area, which represents only 1% of the total geographical area of the country. The smallest areas, population wise, are the North-western region and the West Fjords.

Table 3. Regions of Iceland and some characteristics

Source: Administrative divisions of Iceland, (n.d.); Statistics Iceland, (n.d.e.); Harðarson and Sindradóttir, (2012).

	Name	Pop.	Area (km ²)	Popul. density ⁶	Popul. Share	Administrative centre
1	Capital Region	211.282	1.044	202,00	64%	Reykjavík
2	Southern Peninsula	22.026	816	27,00	7%	Reykjanesbær
3	Western Region	15.566	9.527	1,63	5%	Akranes
4	West Fjords	6.970	9.357	0,74	2%	Ísafjörður
5	North-western Region	7.137	12.591	0,57	2%	Sauðárkrókur
6	North-eastern Region	29.257	22.687	1,28	9%	Akureyri
7	Eastern Region	12.496	22.013	0,57	4%	Egilsstaðir
8	Southern Region	24.366	24.677	0,98	7%	Selfoss
	Total country	329.100	102.712		100%	

As table 3 demonstrates, Icelandic conditions have made the implementation of a proper statistical territorial division in the country problematic. Iceland is one of the most sparsely populated countries in the world with a very imbalanced population by regions which encumbers statistical work and comparison between regions. This applies to tourism as well and is one of the main reasons why the interregional approach cannot be applied in the making of Regional TSA. What makes the territorial division even more complicated in relation to tourism is the fact that a tourism *destination* developed around specific attractions does not necessarily follow administrative boundaries.

According to UNWTO International Recommendations for Tourism Statistics (IRTS, 2008), the main destination of a tourism trip from a demand-side perspective is:

The place visited that is central to the decision to take the trip. However, if no such place can be identified by the visitor, the main destination is defined as the place where he/she spent most of his/her time during the trip. Again, if no such place can be identified by the visitor, then the main destination is defined as the place that is the farthest from the place of usual residence (United Nations, 2010a, p. 13).

In a report on tourism resource mapping published by the Icelandic Tourist Board, an approach was made to define the concept of destination, highlighting the role of transport and access. According to this report, a destination is the equivalent of an accessible attraction

⁶ Population per km²

within a certain distance from tourist services. Five main regions were outlined (the capital area and four other areas around the country) and each of them included subregions based on their uniqueness, as listed in table 4 and figure 2 (Sigurbjarnarson and Gíslason, 2002).

Table 4. Tourism resource mapping in Iceland
Source: Sigurbjarnarson and Gíslason (2002).

Capital area	South West	West Fjords	North	East and South
-	Reykjanes	Suðurfirðir and Barðaströnd	Húnaþing	East
-	South	Norðurfirðir and Djúp	Skagafjörður and Siglufjörður	Southeast
-	Vestmannaeyjar	Hornstrandir	Eyjafjörður	Skaftárþing
-	West	Strandir	Þingeyjarsýslur	-

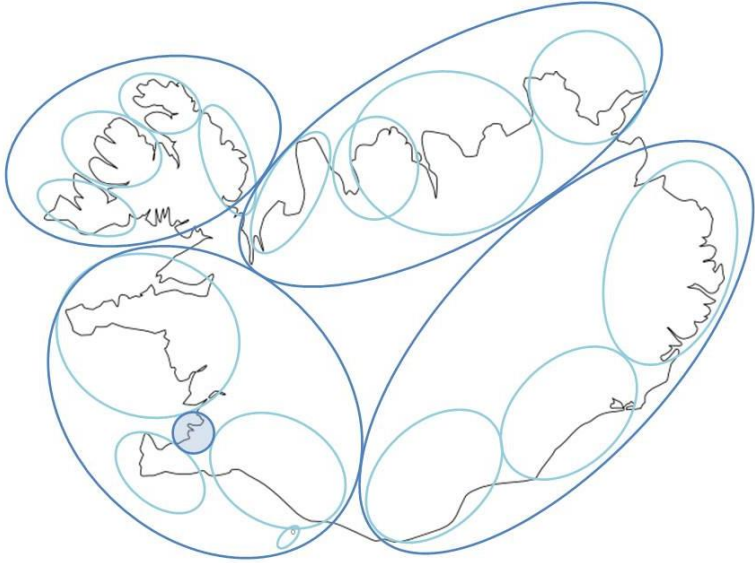


Figure 2. Tourism resource mapping in Iceland
Source: Sigurbjarnarson and Gíslason (2002, p.15).

No matter where the borderlines can be drawn with the intention of defining a destination, it can never be clear-cut as the destination changes continuously with the actions and relations of the visitors and locals. Perceptions of a destination can be formed on the part of tourists as well as by other factors that affect the formation of a destination image (Cai, 2002; Huijbens and Jóhannesson, 2013). Defining destinations in Iceland and demarcating them around the

country therefore continues to be a challenge for Icelandic policy makers, analysts and scholars of tourism.

Industry clusters have been identified and defined as the main driving force of regional economies through the Icelandic regional development policy (Government offices of Iceland, n.d.). This policy is manifest in special regional growth agreements in the eight regions of the country (figure 3). The main concern of these agreements is to bring increased authority and greater responsibility to these regions in Iceland in order to ensure future growth and versatility in employment. Tourism is one of these specified clusters (Government Offices of Iceland, n.d.; Huijbens & Bjarnason, 2014; Huijbens, Jóhannesson, & Jóhannesson, 2014). Tourism in Iceland is different from most other industries in the country as it is usually tied to natural attractions. These are resources that cannot be transferred from the destination, such as in the case of fishing rights in Iceland, which has affected many coastal communities. This gives rural areas in Iceland a certain advantage in the case of resource and destination management (Huijbens & Bjarnason, 2014; Karlsdóttir, 2008; Karlsdóttir & Benediktsson, 2011).

2.3.2 Research area

The Icelandic Regional Development Institute (IRDI) monitors regional development in Iceland. The institution follows a strategic regional plan which divides the country into eight regions with the aim of enhancing settlements in rural areas through viable, long-term projects with various economic origins (figure 3). These regions are slightly different from the LAU1 demarcation, but coincide with the special regional growth agreements. As can be seen, these administrative regions sit somewhat awkwardly compared to the attempted definition of tourism destinations (figures 2 and 3).

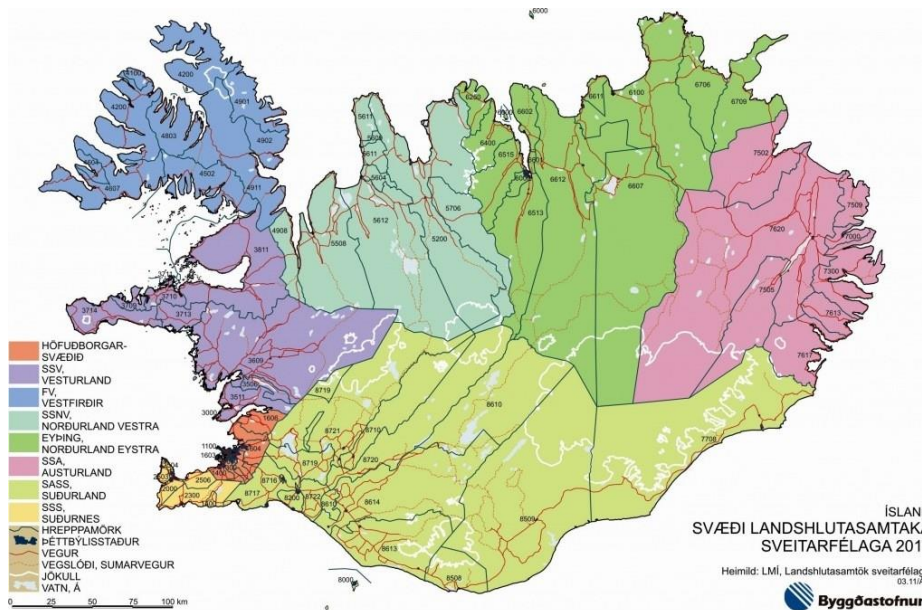


Figure 3. Icelandic Regional Development Institute’s area demarcation

Source: Icelandic Regional Development Institute (n.d.).

North East area

Despite the variation between some LAU1 regional demarcation and the IRDI’s demarcation, the Northeast area (Eyþing, Norðurland Eystra – fig. 3) remains the same in both cases. This area is the second largest both in terms of population and area. Tourism has a long history in this area where Lake Mývatn and its surroundings play an important role.

The share of Northeast Iceland in national GDP was 7% in 2013. The largest part came from the service sector (63%) whereof hotels, food and beverage (F&B) services, transport and commerce counted for 14%⁷ (figure 4). When comparing these figures with 2003 (figure 5), one can see that the production from the service sectors (red colour) has increased whereas other industry sectors have declined. The main changes occurred in the seafood industry sector (decrease from 24% to 14%) and the banking, insurances and real estate sector where the production increased from 16% to 26% (Jóhannesson & Árnason, 2011; Jóhannesson, Árnason, & Sigurðsson, 2015).

⁷ The results in chapter 4 are based on other calculation methods (TSA recommended methodological framework).

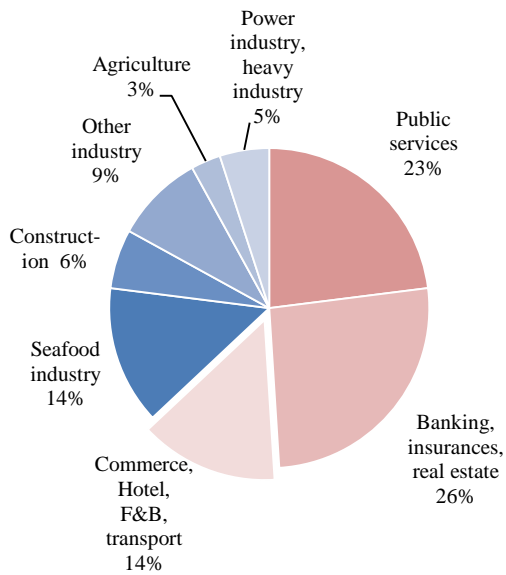


Figure 4. Regional GDP by categories in NE-Iceland 2013
Source: Jóhannesson, Árnason, & Sigurðsson (2015)

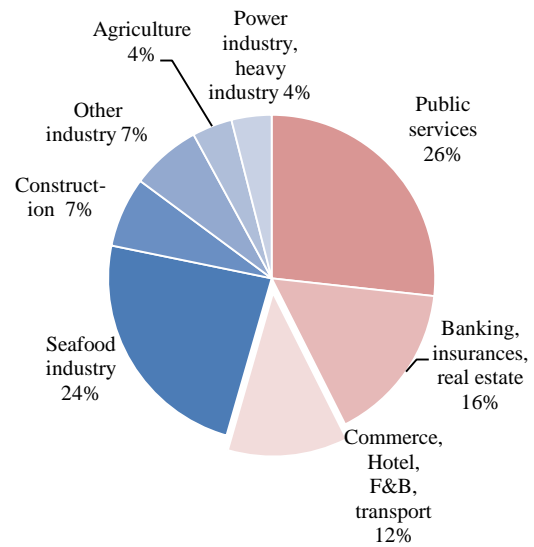


Figure 5. Regional GDP by categories in NE-Iceland 2003
Source: Jóhannesson & Árnason (2011)

At the same time, the capital region's total share of GDP has been growing in the last years and counted for about 71% in 2013, compared to 64% in 2003, according to the Institute of Economic Studies (Jóhannesson & Árnason, 2011; Jóhannesson et al., 2015).

The economic growth in Iceland was 3% in 2013. The growth in NE-Iceland was 0% at the same time. When focusing on the five-year period of 2009-2013 these numbers are 4% for the country as a whole and 3% for NE-Iceland (Jóhannesson et al, 2015).

The category of commerce, hotel, F&B and transport grew from 12% of the total regional GDP in 2003 to 14% in 2013 in Northeast Iceland. These sectors are involved with tourism as demonstrated in table 1.

Þingeyjarsýslur

The Icelandic Regional Development Institute divides Northeast Iceland into two parts in the institute's regional analysis: the Eyjafjörður area and the Eastern area (Þingeyjarsýslur counties) (Icelandic Regional Development Institute, 2014). The latter is the subject of this research, consisting of six municipalities with a total population of 4.791 (Jan 2015) (Húsavík Academic Centre, 2015; Statistics Iceland, n.d.c.). The municipalities are: Þingeyjarsveit, Skútustaðahreppur, Norðurþing, Tjörneshreppur, Svalbarðshreppur and Langanesbyggð (figure 6).

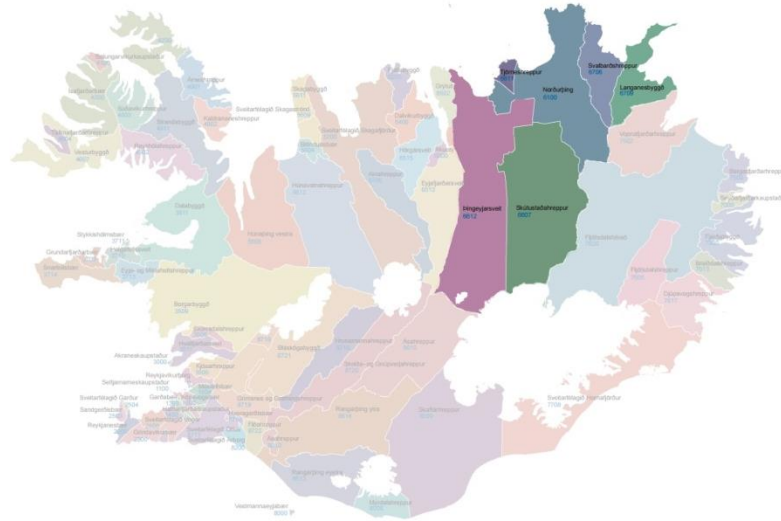


Figure 6. Research area

Source: National Land Survey of Iceland (n.d.).

During the last three decades, Pingeyjarsýslur have suffered economic recession followed by a decline in population. The collapse of the shrimp industry along with mergers and acquisitions in the fishing industry have resulted in the closing of fish processing plants at the same time as quota holders have sold valuable fishing rights away from the region. The closing of the regional cooperative along with its food processing plants proved to be a setback for the society as well as the closing of the silica plant at Lake Mývatn, to name other compounding factors.

At the same time, the tourism industry has grown as the area boasts a series of natural and man-made tourist attractions which are attracting a growing number of tourists every year. The rise in tourism has indisputably provided important counterweight to this regional economic recession. Tourism is generally labour-intensive and is often considered suitable to tackle unemployment as it does not demand extensive training or experience and provides jobs with low entry demands (Inkson & Minnaert, 2012; UNWTO, 2014a).

The research area population represented 1,46% of the total Icelandic population (329.100) in 2015. There has been a sustained population decline in the region over the last decades (figure 7). In the last ten years, the decline was 6,3% (322 individuals), varying between municipalities. Over a period of 20 years (1996-2015) the decline was 19,5% whilst the Icelandic population grew 22,8% as demonstrated in figure 8 (Húsavík Academic Centre, 2015; Statistics Iceland, n.d.c.).

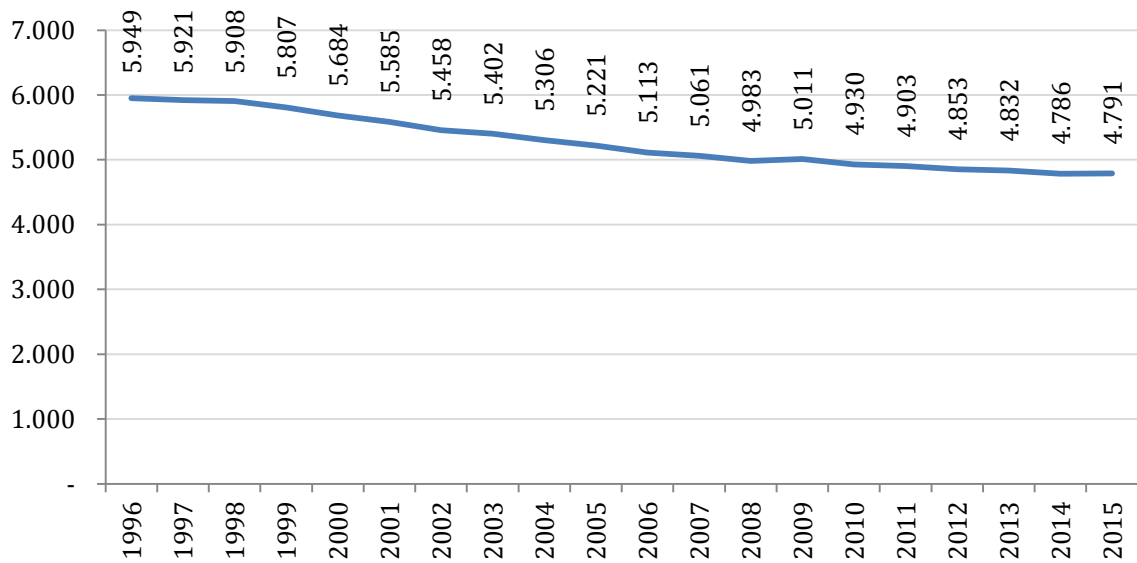


Figure 7. Population in Þingeyjarsýslur 1996-2015
 Source: Statistics Iceland (n.d.c.).

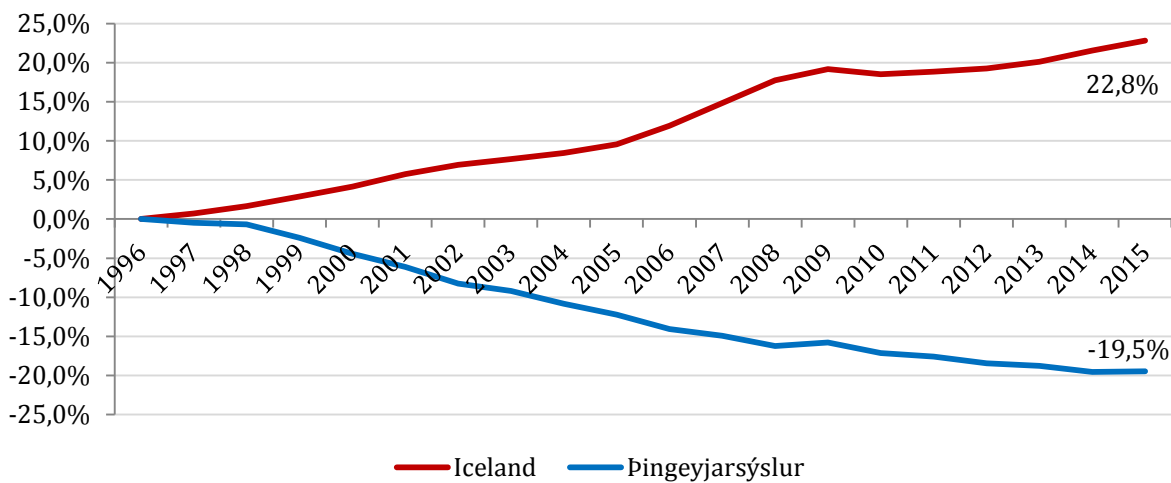


Figure 8. Relative population development 1996-2015 in Iceland and Þingeyjarsýslur
 Source: Statistics Iceland (n.d.c.).

2.4 INBOUND VISITOR SURVEY

For the demand side there is a serious lack of tourism data at regional level in Iceland. The possibilities of retrieving regional information from the ITB inbound visitor survey are limited so a special inbound visitor survey had to be conducted in the research area. A questionnaire was developed and tested in collaboration with the Húsavík Academic Centre and the University of Iceland Research Centre, and a total of four inbound visitor surveys were conducted in the region during the summers of 2013 and 2014. One survey was carried out each year in Húsavík and another survey each year in the region of Lake Mývatn. The questions were based on the inbound tourism data frame and indicators as proposed in the WTO manual for data collection and analysis for tourism management and planning (UNWTO, 1999). The main categories were the following:

- Arrivals
- Arrivals by region
- Arrivals by main purpose of visit
- Arrivals by mode of transport
- Arrivals by form of organization of the trip
- Accommodation
- Expenditure

More specifically, visitor profile statistics were based on Cooper, Fletcher, Fyall, Gilbert, & Wanhill (2005) (table 5).

Table 5. Focus factors in the visitor profile statistics

Source: Cooper et al. (2005, p. 88).

The visitor	The visit
Age	Origin and destination
Sex	Mode of transport
Group type	Purpose of visit
Country of residence	Length of stay
Occupation	Accommodation used
Income	Activities engaged in
	Places visited
	Tour or independently organised

The questionnaire consisted to a large extent of structured questions where respondents chose an answer from a list of pre-determined options. However, questions on country of residence, age, education, expenditures and the main reason of visit were open-ended questions, allowing the respondents to provide more specific answers (Appendix 1). The questions were restricted to those who stayed in Húsavík or around Lake Mývatn for a period of 24 hours. Those who stayed for a shorter period estimated the expenditure during their stay in the area and those who stayed longer were asked to limit their expenditure estimate to 24 hours.

Participants in the survey were asked to provide certain basic information about themselves, such as age, gender, residence, education and income (demographic variables). These data were used to shed light on the composition and background of the visitors at the same time as it enabled comparison with previous visitor surveys in the area as well as a comparison with the inbound visitor survey on the national level commissioned by the Icelandic Tourist Board. As the main focus was on Húsavík and the Lake Mývatn region, the travel related questions were based on the travel behaviour in those areas and not in Iceland in general. The main expenditure categories were based on the classification provided by the UNWTO International Recommendations for Tourism Statistics:

- Accommodation
- Food and drink
- Local transport
- Recreation, culture and sporting activities
- Shopping
- Others

Questionnaires were distributed to all reachable inbound visitors to the regions, 18 years and older, who agreed to participate in the survey. This convenience sampling yielded a total number of 451 to 492 valid answers in the four surveys and the response rate was from 71%-76%.⁸

⁸ The response rate was only calculated in 2014.

2.5 SURVEY ON TOURISM COMPANIES

In order to establish the number of tourism companies in the area, a list of enterprises categorised by the ISAT 2008 classification was retrieved from the Statistics Iceland's Enterprise Register data. Two criteria were established in order to exclude companies that were not operational. Companies had to deliver salary payments or show revenues at the Directorate of Internal Revenue during the research period.

Despite these criteria, an obvious bias in the companies list occurred as large companies such as hotel chains and other companies with operations in more than one place in the country were missing. In order to limit this sample error, an additional approach was used.

Each section from the ISAT 2008 list was taken into consideration and compared to other information sources (table 6). These sources were the following:

- Travel agencies and tour operator licence list by the Icelandic Tourist Board.
- Accommodation and restaurant licence list from the NE Iceland District Commissioner.
- Destination Marketing Organisation registration of tourism related companies in the region.
- Northeast Iceland development agency's list of companies by categories.

Table 6. Data sources for identifying tourism related companies in the Þingeyjarsýslur region, example from the Accommodation sector

	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6	Company 7	Company 8	Company 9	Company 10
Section I – Accommodation and Food Service Activities										
55 Accommodation										
55.1 Hotels and similar accommodation										
Statistics Iceland Enterprise Register	x		x		x	x		x		x
Northeast Iceland Development Agency	x	x		x	x	x		x	x	
Icelandic Tourist Board: Licenced tour operators and travel agencies				x				x		
NE Iceland District Commissioner: Licence list for accommodation and restaurants	x	x	x	x	x	x	x	x	x	x
Destination Marketing Organisation in North Iceland (DMO)	x		x	x	x	x	x	x		x

Through combining these four sources with the Enterprise register of Statistics Iceland a total population of tourism related companies in the study region is believed to have been reached,

consisting of 189 tourism entities. This list was analysed further, eliminating companies with no function in 2013. Eventually data from 126 companies was analysed.

Due to possible biases and gaps in the regional list of tourism companies from the Enterprise Register, no economic data could be retrieved from this official database by regions on the entities to be analysed. The same applies to enterprise operating accounts by section from Statistics Iceland and credit card turnover from the Centre for Retail Studies. These contain important indicators on economic development in the country and would have been useful in this study had they been regionally dividable. Therefore, the only reliable data source for regional financial information in this research was the tourism companies themselves. Therefore, semi-structured interviews with the enterprise representatives were used as the main data collection method. Semi-structured interviews include specified questions but allow for probing to seek clarification and explanation of the discussion topic (Finn, Elliott-White, & Walton, 2000). In the interviews, the main emphasis was on the following subjects:

- Total revenues in the year 2013
- Estimated tourism ratio from the above revenues
- Total cost in the year 2013 (salaries and amortization excluded)
- Operation cost paid to companies or organizations within the research area
- Operation cost paid to companies within North East Iceland
- Salary payments
- Investments
- Number of employees, Annual Working Units and Full Time Equivalents (summer and winter)
- Ratio of employees with registered domicile within the research area
- Supplies and services – ranked by scope of business within the research area
- Taxes and fees
- Origin of employees (former jobs or education)

The already described UNWTO methodology for TSA compilation solely measures the direct effects of tourism on the economy. In order to evaluate the indirect effects, additional questions on total cost, investments, supplies and services were asked in the interviews, enabling a wider measurement of the total effects of tourism in the region.

A pilot test of six companies was implemented one month before the main interviewing period. Pilot testing generally indicates potential flaws, limitations, or other weaknesses

within the interview design and allows for necessary revisions and adjustments of questions before the implementation of the study (Turner, 2010). The testing revealed some difficulties for the interviewees in obtaining the requested information from the companies' accounting systems and adjustments were made to the questions in order to improve the reachability of the statistical information.

An introduction letter was sent to each company in the research population where the research was described and participation required. The letters were followed by an e-mail or a phone call to decide a time for the interview and to confirm participation. In most cases, the interview took place in the interviewee's office and the total duration ranged from 20 minutes to 1 hour.

All 126 companies established as relevant were asked to participate in the research. Thereof 102 accepted participation, which results in a 81% response rate (table 7). For the 19% of the companies that did not participate, the total turnover and tourism share was estimated, based on their answers to the survey (Appendix 3). The low response rate in the sport and recreational industry, where three companies rejected participation, is coincidental.

Table 7. Companies' response rate

	Companies	Answers	Response rate
Accommodation services	33	30	91%
F&B serving services	7	6	86%
Transportation	5	4	80%
Travel agencies and other reservation services	17	14	82%
Cultural services	5	5	100%
Sport and recreational services	4	1	25%
Goods purchased from trade activities	18	14	78%
Other services	37	28	76%
Total	126	102	81%

3 NON-MONETARY INDICATORS

Tourism economic impact assessment requires non-monetary indicators to support the interpretation of tourism monetary information. These indicators include e.g. the number and classes of visitors, the duration of stay, types of accommodation and the number and size of tourism establishments (United Nations, 2010b).

This chapter discusses these factors, focusing mainly on visitor numbers and overnight stays.

3.1 VISITOR NUMBERS

Understanding the spatial behaviour of visitors is essential for effective tourism management. Inter-destination movements from tourist-generating regions to one or more destinations and intra-destination movements within a destination are both necessary subjects of analysis. Studying the flow of visitors enables more effective planning, budgeting, determination of demand trends, tourism impact analysis, and measurement of social, political and economic importance of tourism at each place (Lau & McKercher, 2007; Orellana, Bregt, Ligtenberg, & Wachowicz, 2012; Wolf, Hagenloh, & Croft, 2012).

The flow of international visitors to the country of reference includes both tourists (overnight visitors) and same-day visitors. Arrivals data are generally attained from sources such as administrative records (e.g. traffic counts and immigration control) as well as visitor surveys and accommodation surveys (United Nations, 2010a; UNWTO, 2014b). Additional counting methods have been used worldwide for tourist counting. These include manual observation and tallying in various places and regions, mechanical and electronic counters such as wired door counters, GPS tracking, road traffic detectors, vehicle and people counters with magnetometers etc. (Ahas, Aasa, Mark, Pae, & Kull, 2007; Icelandic Road and Coastal Administration, n.d.; Lau & McKercher, 2007; Ólafsson, 2012, 2014; Wolf, Hagenloh, & Croft, 2012).

In Iceland, travellers who pass through the airport terminal at Keflavík (KEF) upon departure are counted and registered by their nationalities. Monthly numbers are published at the website of the Icelandic Tourist Board (ITB). Visitors arriving at Seyðisfjörður harbour with M/S Norröna are estimated by Austfar (Smyril Line's sales office) and passengers coming to the country through other airports are estimated through figures from the Icelandic Aviation Authorities (ISAVIA) by the Icelandic Tourist Board. The total sum of the above passengers

is then published, presenting the total number of foreign visitors to Iceland every year. Cruise passengers are not included in these numbers (Frenç, 2013; Icelandic Tourist Board, n.d.a.; Óladóttir, 2014; United Nations, 2010a). International visitors in KEF are classified by 17 nationalities (Frenç, 2013; Icelandic Tourist Board, n.d.a.). Arrivals per mode of transport are quite simple in Iceland as the only possible transport mode is by air or sea. These numbers are counted separately and published by the ITB on a national level (Icelandic Tourist Board, n.d.a.).

Foreign visitors to Iceland are not counted by regions. However, an approximation can be provided by calculating ratios of those stating that they have visited specific areas from the inbound visitor surveys commissioned by the ITB (Icelandic Tourist Board, 2014a-b), as well as from specific surveys conducted by Tourism Research & Consulting Ltd. (TRC), with the total numbers of foreign visitors. However, these surveys are conducted on an irregular basis and rely on the memory of respondents which emphasises the need for a regular and reliable tourist counting per region. New vehicle counters with magnetometers have recently been implemented in selected areas, whereof 14 are located within Þingeyjarsýslur (Þórhallsdóttir, 2016; Ólafsson & Þórhallsdóttir, 2015; Þórhallsdóttir & Ólafsson, 2015).

Information on visitors' numbers in Þingeyjarsýslur is therefore still scarce and the only regularly published numbers are those retrieved from the ITB visitor survey. Other numbers need to be accumulated from the tourist companies themselves, information centres, harbours, occasional private counters etc. In this study, a report from TRC was purchased in cooperation with Húsavík Academic Centre and Northeast Iceland Development Agency. These numbers are retrieved from TRC's visitor survey in KEF. Other numbers were accumulated from local museums, whale watching companies, the tourism information centre at Lake Mývatn, the Mývatn Nature Baths, and campsites, as well as from new vehicle counters located around Lake Mývatn. Figures 9 to 11 are based on the TRC survey.

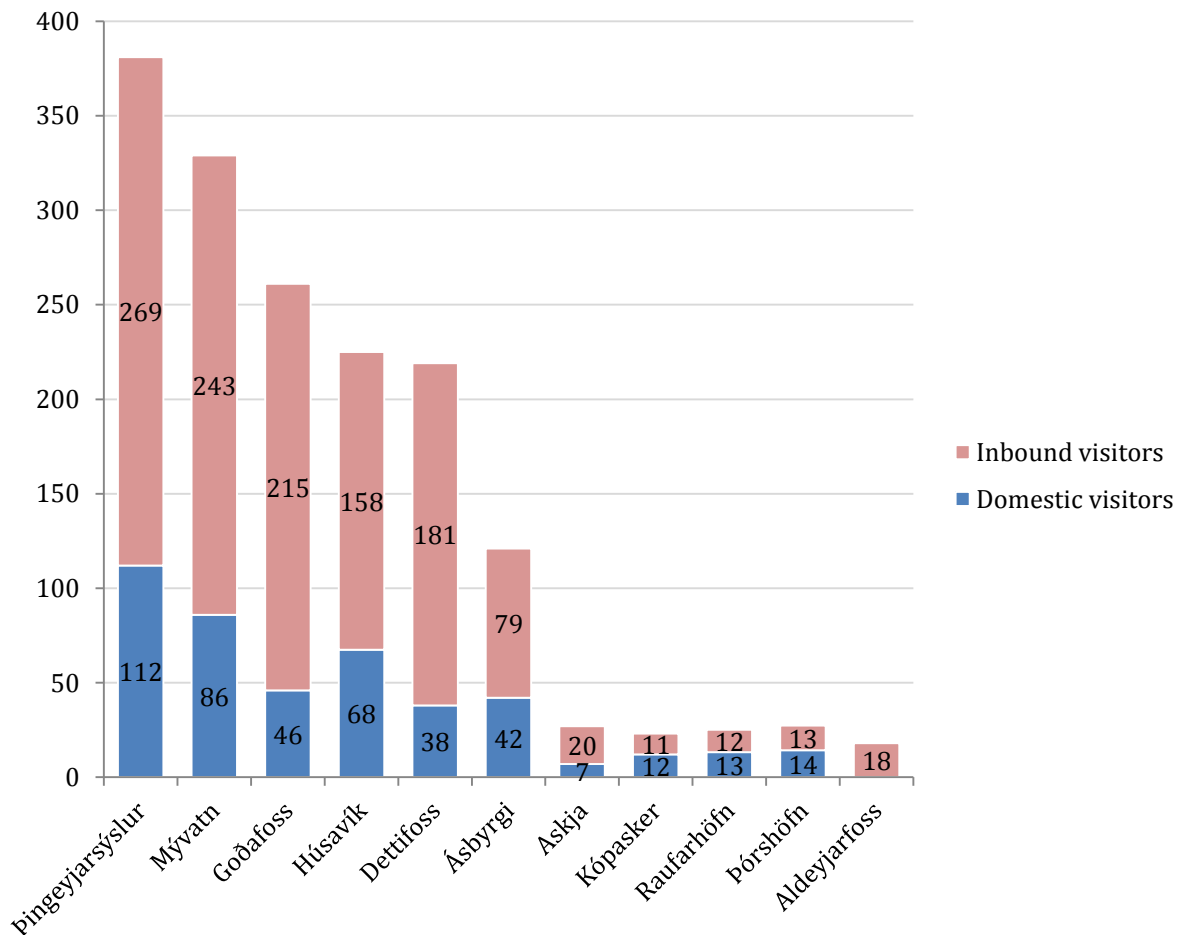


Figure 9. Number of visitors to Þingeyjarsýslur and selected areas in 2014 ('000 visitors)
Source: Guðmundsson (2015).

In Þingeyjarsýslur, the estimated total visitor number was 312.000 in the year 2013 (205.000 inbound visitors and 107.000 domestic visitors). In 2014, this number reached 381.000, whereof 269.000 were inbound visitors and 112.000 were domestic visitors, according to TRC (Guðmundsson, 2015). When cruise ship passengers are included, the total number of visitors to Þingeyjarsýslur in 2014 reached 417.000 (Guðmundsson, 2015).

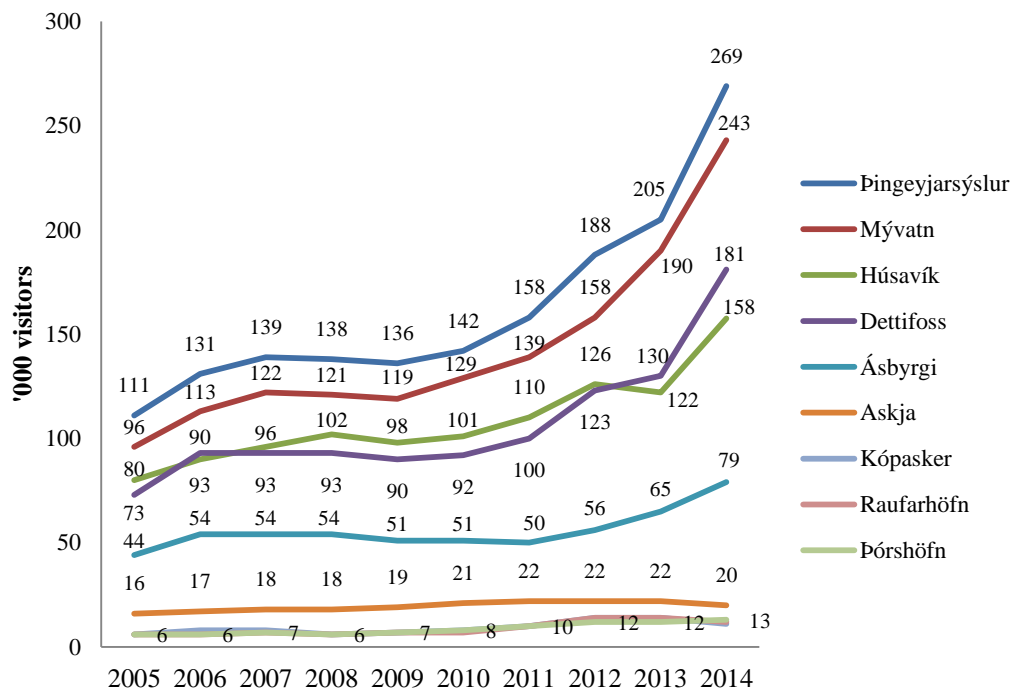


Figure 10. Inbound visitors in Píngeyjarsýslur and chosen areas 2005-2014 ('000 visitors).
 Source: Guðmundsson (2015)

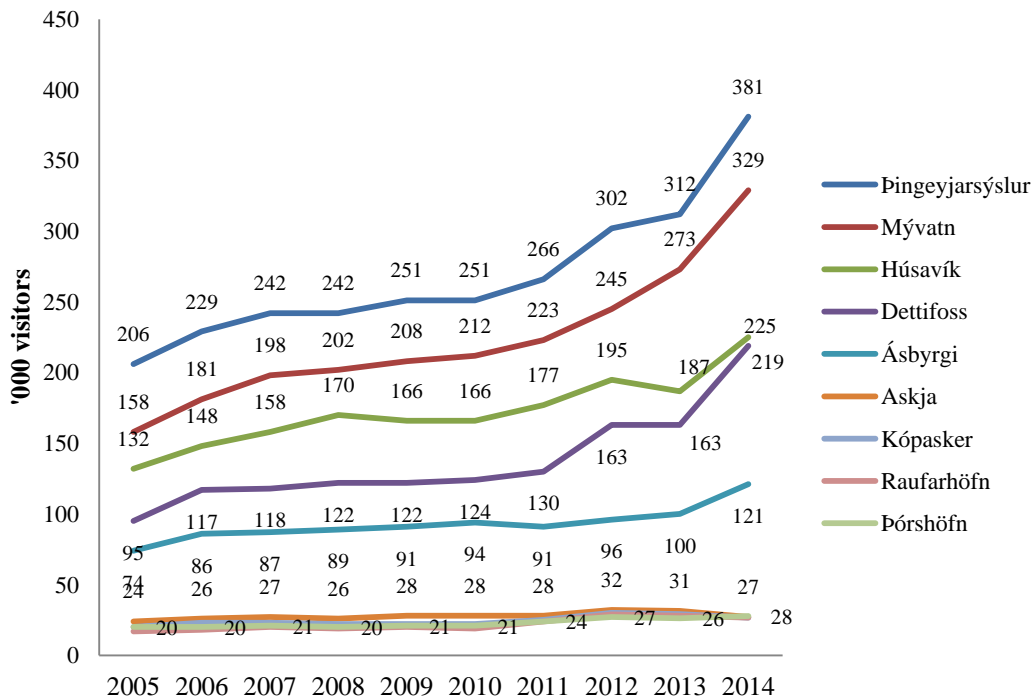


Figure 11. All visitors in Píngeyjarsýslur and chosen areas 2005-2014 ('000 visitors).
 Source: Guðmundsson (2015).

In order to compare the development of visitor numbers in Þingeyjarsýslur to the total number of inbound visitors coming to Iceland, an index calculation was made as presented in figure 12. The figure presents a strong positive correlation between the total number of arrivals in Iceland and visitor numbers in Þingeyjarsýslur ($r=0,99$).

Mývatnssveit and Dettifoss follow the arrival trend to Iceland very closely, but there is more variation between Húsavík and Ásbyrgi and the national inbound tourism numbers.

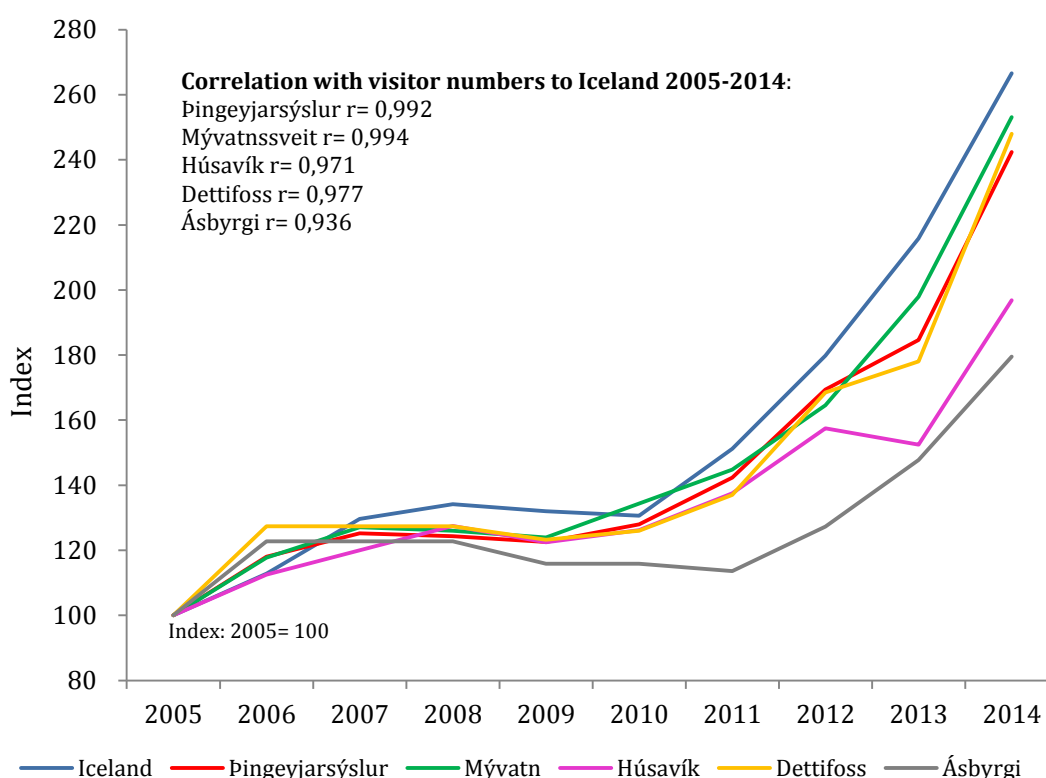


Figure 12. Inbound visitor arrivals. Index numbers 2005-2014.

Source: The author's elaboration based on data from Statistics Iceland (2014a, 2015a).

When analysing the total inbound visitor numbers around Lake Mývatn and Húsavík a comparison was made with the total passenger numbers going whale watching in Húsavík and the number of foreign visitors to the Mývatn Nature Bath. A strong positive correlation was calculated in both instances, as presented in figures 13 and 14, and this is in line with the growth in visitor numbers documented in the TRC surveys. During the period of 2006⁹ to 2014 the annual average ratio of inbound visitors to the Lake Mývatn region who visited the

⁹ 2006 is the first year when visitor numbers in the Mývatnssveit Nature bath were categorised by inbound and domestic visitors.

Mývatn Nature Baths was 38%. In Húsavík, 44% of total inbound visitors to Húsavík went whale watching during the same period.

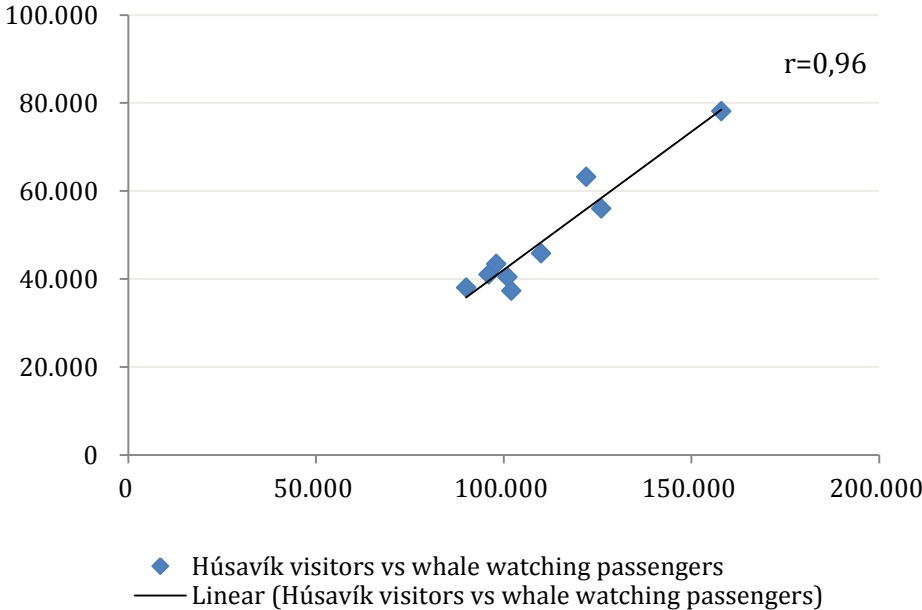


Figure 13. Correlation between total inbound visitors to Húsavík and whale watching passengers in Húsavík during the period of 2006-2014.

Source: The author’s elaboration on data from local whale watching companies and Guðmundsson (2015).

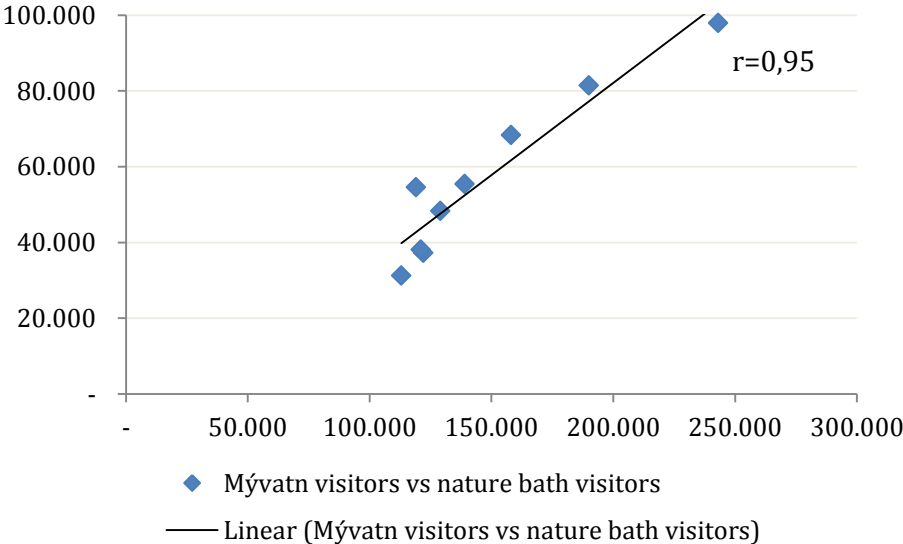


Figure 14. Correlation between total inbound visitors to the Lake Mývatn region and foreign visitors to Mývatn Nature Baths during the period of 2006-2014.

Source: The author’s elaboration on data from Guðmundsson (2015) and Mývatn Nature Baths (2015).

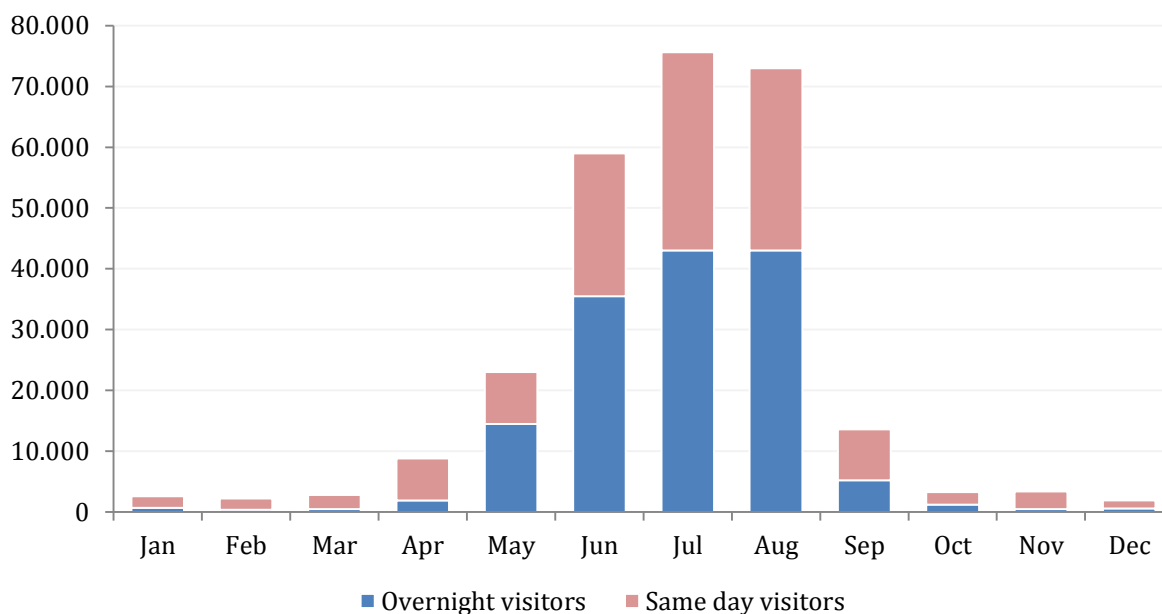


Figure 15. Number of inbound visitors in Þingeyjarsýslur 2014 by months.

Source: Rögnvaldur Guðmundsson (2015).

According to the Tourism Research & Consulting surveys, 55% of the inbound visitors to Þingeyjarsýslur in 2014 stayed overnight. Almost all (91%) of the total visits occurred during May to September. The same ratio for June to August was 77%.

Figure 16 shows that the majority of the 269.000 inbound visitors who came to Þingeyjarsýslur in 2014 came from Central and Southern Europe (45%).¹⁰ At the same time, 35% of the total number of inbound visitors to Iceland came from these countries. Visitors from the Benelux countries to Þingeyjarsýslur constituted 7% of total inbound visitors to the region. In comparison, 4% of the inbound visitors to Iceland came from the Benelux countries (Guðmundsson, 2015).

¹⁰ In the TRC report, the Central European countries are Germany, Austria and Switzerland. The Southern European countries constitute Italy, France, Spain, Portugal, Greece and the Mediterranean islands.

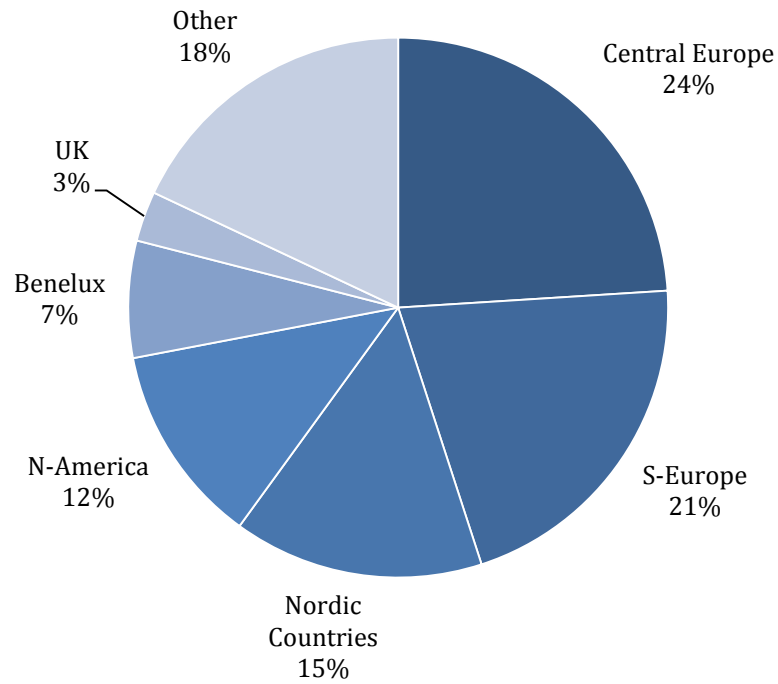


Figure 16. Country of residence of visitors to Þingeyjarsýslur.

Source: Rögnvaldur Guðmundsson (2015).

A closer look at the country of residence can be gained from the visitor survey in the Mývatn region and Húsavík from 2014. The difference between country of residence in the case of visitors to Þingeyjarsýslur and the nationality of the inbound visitors to Iceland is presented in figure 17.

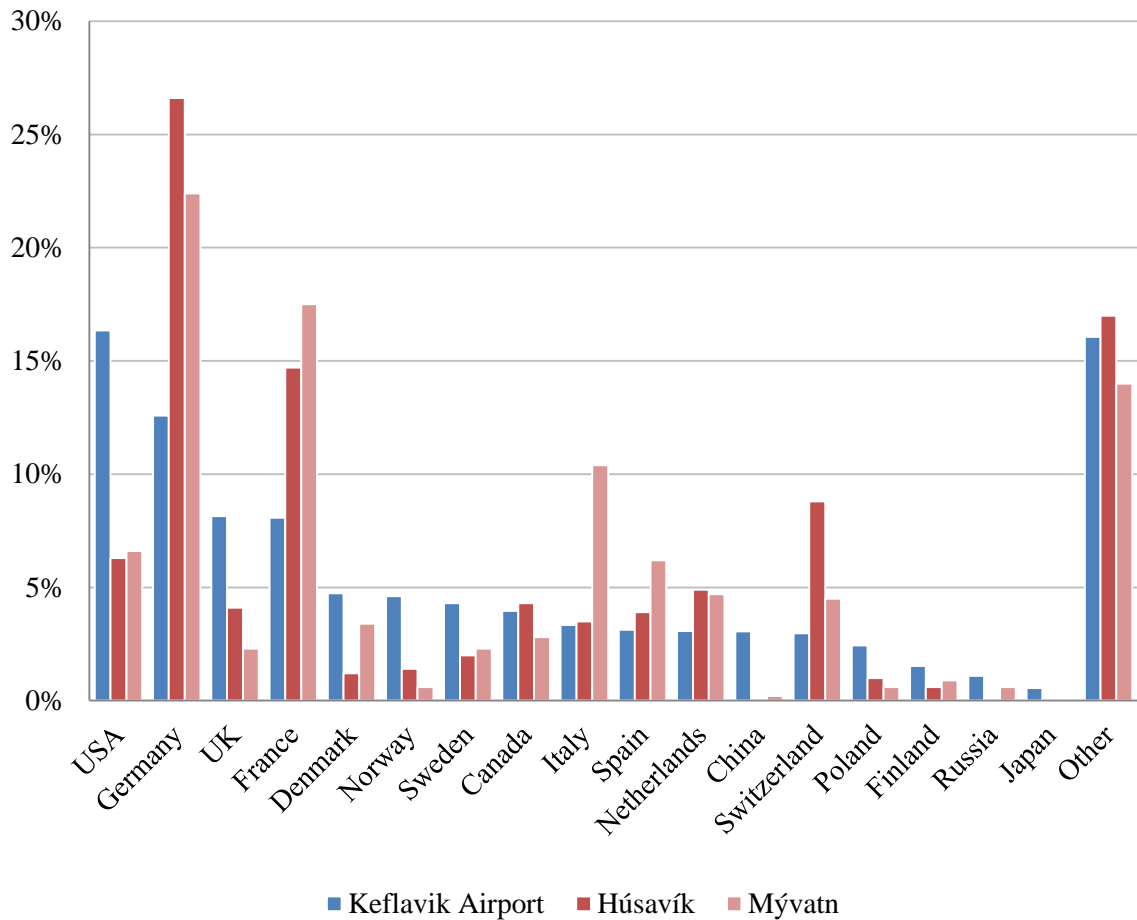


Figure 17. Inbound visitors to Iceland, Húsavík and the Lake Mývatn region in summer 2014 by country of residence.

Source: Icelandic Tourist Board (n.d.a.), Rögnvaldsdóttir (2014b) and the author’s elaboration on results from visitor surveys in the Mývatn region and Húsavík summer 2014 (unpublished).

In 2014, visitors from the USA represented 16% of the total inbound visitor number to Iceland during the period of June to August. At the same time, the American visitors to the Mývatn region were only 7% of the total. The largest group in the Mývatn region and Húsavík came from Germany (22% and 27%) whilst this group represented only 13% of total inbound visitors to Iceland. Figure 17 demonstrates this difference more specifically. It presents the 17 nationalities, surveyed upon departure from KEF. Nationals from Belgium and Austria are not counted and therefore not listed in the figure. According to the Lake Mývatn and Húsavík visitor surveys, 7% of all inbound visitors to the Lake Mývatn region in the summer of 2014 came from Belgium (3% in Húsavík) and 4% from Austria (3% in Húsavík).

The ratios of visitors' country of residence are in accordance with the trend in Statistics Iceland's accommodation statistics for NE-Iceland in 2014, as discussed in chapter 3.2.

Cruise ship passengers are classified as inbound same-day visitors, as they do not reside in the country of arrival and stay only for the day without spending the night in collective or private accommodation in the country. They are not included in the countries visitor tallying at KEF.

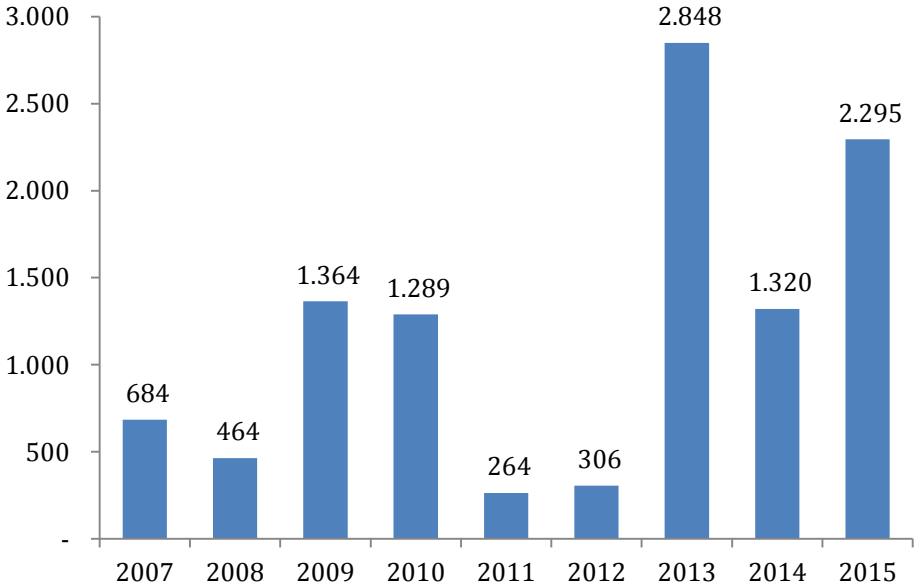


Figure 18. Cruise ship passengers in Húsavík 2007-2015
Source: Icelandic Tourism Research Centre (2014) and Húsavík harbour (2015).

The total number of cruise ship passengers in 2015 was 2,295, on 14 cruise ships. That year the greatest number of cruise ships since registration started were hosted in Húsavík. However, the passenger number was higher in 2013, through only six cruise ship arrivals, which is explained by exceptionally large cruise ships berthing in August that year.

3.2 ACCOMMODATION STATISTICS

Accommodation statistics are a vital part of the tourism statistics system in the EU and these have been collected systematically since 1995 with the establishment of a tourism statistics system in Council Directive 95/97/EC (Eurostat, 2014b). Even though accommodation statistics are only relevant for one type of visitors (i.e. overnight visitors), the accommodation sector is one of the core tourism sectors and its economic importance can be gauged in the TSA results from many European countries where accommodation services account for about 15% to 20% of total internal tourism expenditure (Eurostat, 2012).

Statistics Iceland has collected data on the capacity of accommodation establishments in Iceland as well as data on overnight stays since 1984. The data gathering covers all types of accommodation establishments except for trade-union summer houses. Since 1995, data on arrivals at accommodation establishments has been collected, which enables calculations on the average length of stay. The accommodation statistics give information on the capacity and occupancy, number of arrivals and overnight stays in accommodation establishments categorised by type of accommodation, region and the citizenship of guests. The data source is a report sheet that is to be delivered monthly to Statistics Iceland by everyone who sells accommodation in Iceland. The report details the capacity, the number of overnight stays and the arrivals by citizenship of guests at each accommodation establishment.

Accommodation statistics are one of the very few tourism statistics in Iceland that are allocated by regions. The numbers are presented separately for the eight regions of Iceland mentioned in table 3.

Figures 19, 20 and 21 demonstrate overnight stays per months in Þingeyjarsýslur in 2014. The total number of overnight stays in 2014 was 292.539, whereof 212.953 were nights spent by inbound tourist (73%). This same number was 206.808 the year before, whereof nights spent by inbound tourists were 79%. The seasonal fluctuations were particularly high in the tourist accommodation sector where 83% of annual nights spent were recorded in the three peak months, June to August 2014 (243.699 nights).

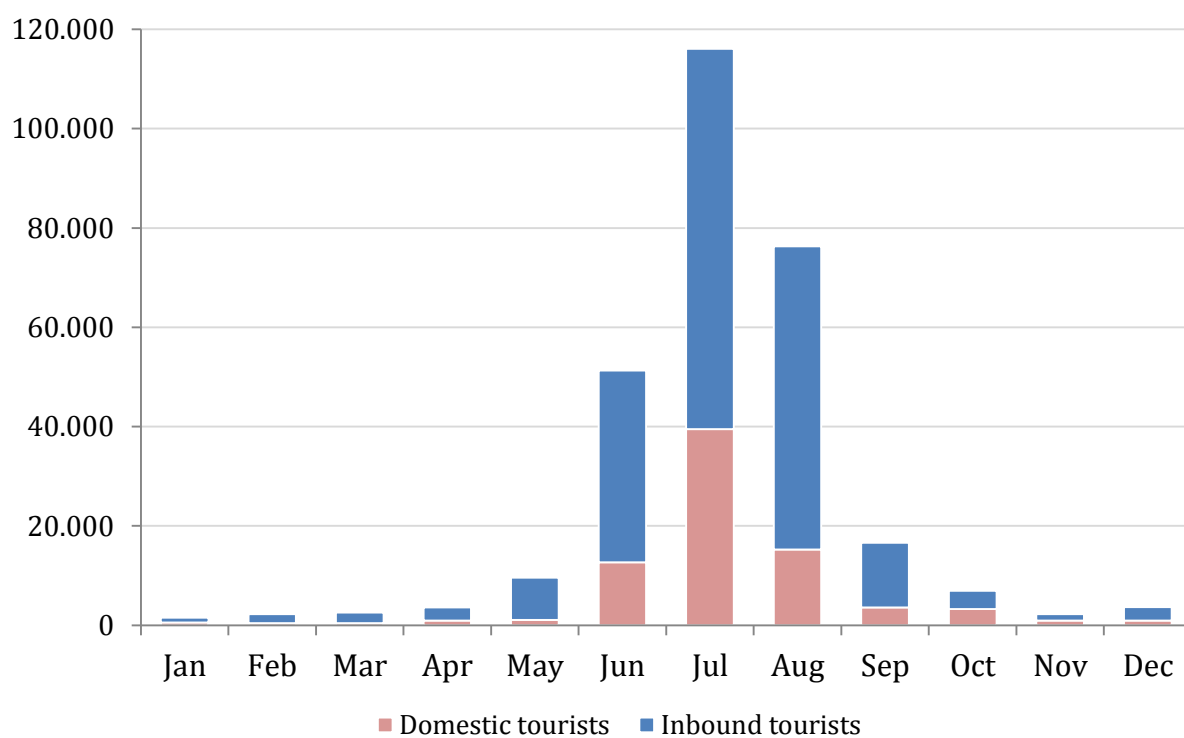


Figure 19. Overnight stays in Píngeyjarsýslur 2014. All types of accommodation establishments
Source: Statistics Iceland (2015a).

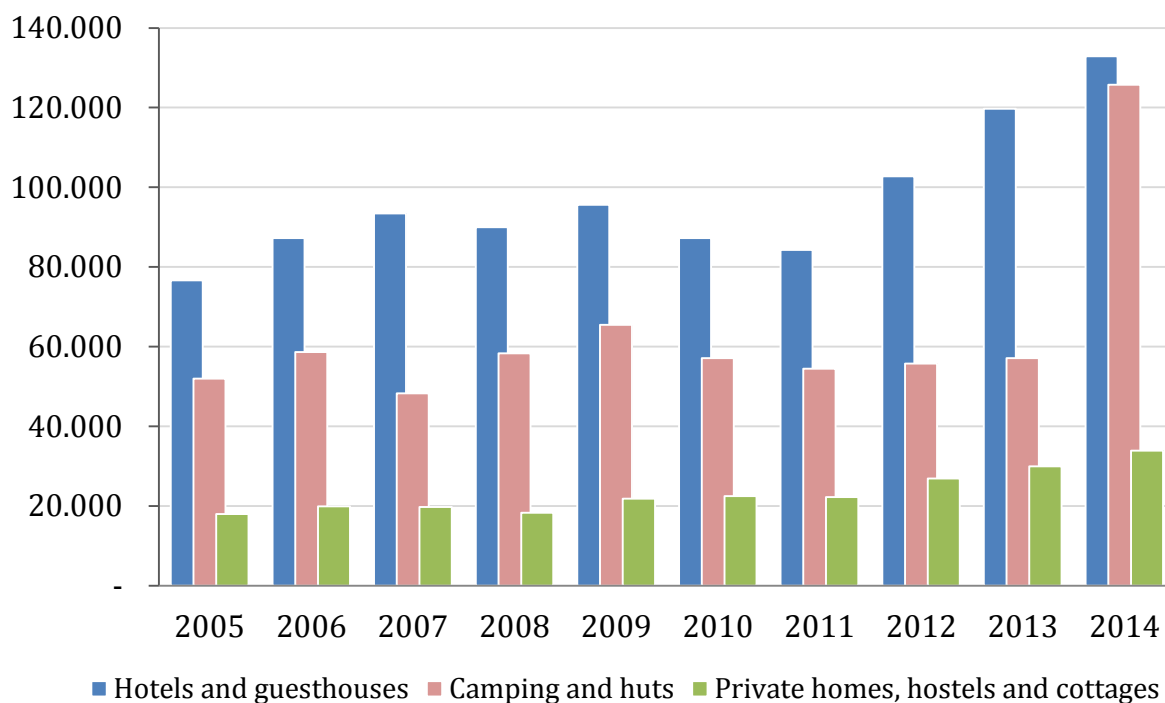


Figure 20. Overnight stays in Píngeyjarsýslur by types of accommodation establishments. All tourists.
Source: Statistics Iceland (2014a and 2015a).

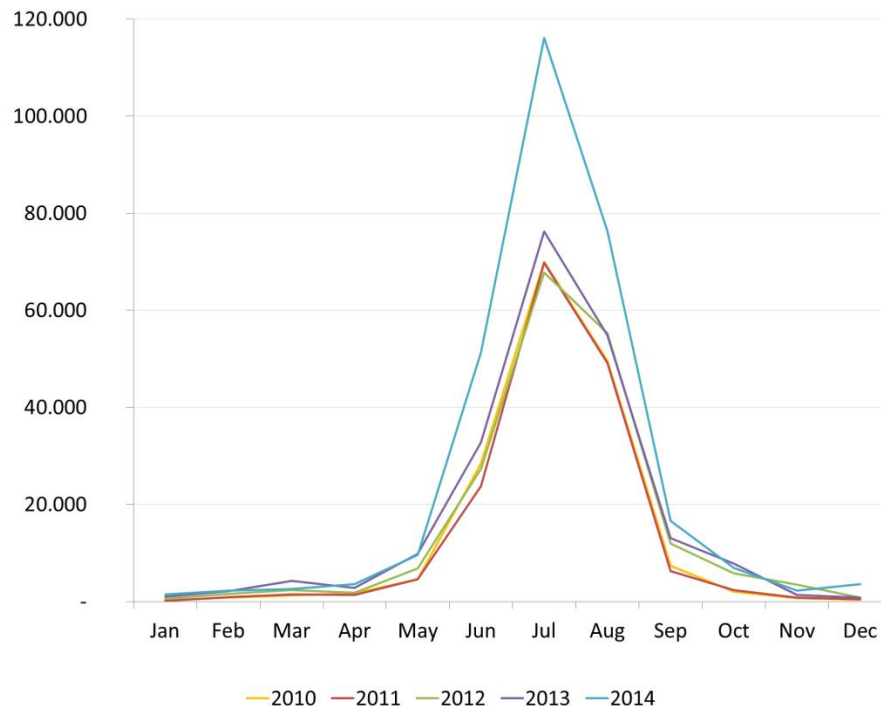


Figure 21. Overnight stays in Þingeyjarsýslur by months, 2010-2014. Inbound tourist on all types of accommodation establishments.

Source: Statistics Iceland (2014a and 2015a).

As can be seen in figures 20 and 21, a sudden growth in overnight stays occurred from 2013 to 2014. This increase was mainly in the category of camping places.

This extraordinary increase in overnight stays in camping sites was put under consideration and compared to other areas in the country. As demonstrated in figure 22, this rapid increase occurred in other places as well, such as the Northeast and the East, but not to the same extent. A significant increase also occurred in the South. These numbers have been discussed with Statistics Iceland, and confirmed on their behalf.

Figure 23 demonstrates the proportional division of overnight stays per month and region in Iceland. The numbers are averages for nights spent by inbound tourists per month during the period of 2005-2014. The figure demonstrates well the seasonal differences between the capital area and other regions where each month sums up to 100%.

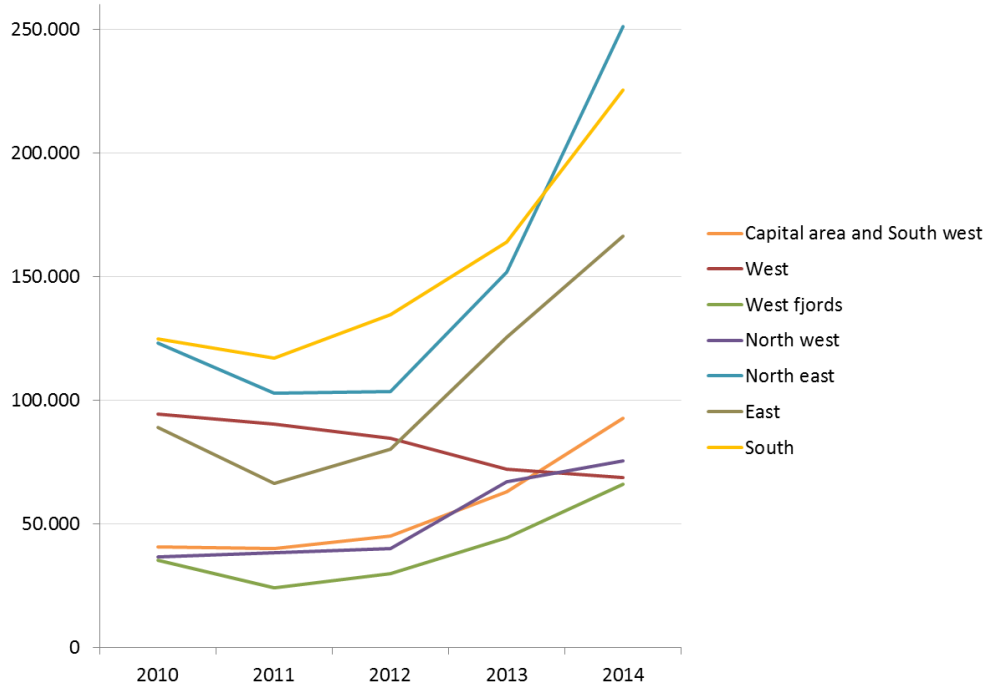


Figure 22. Overnight stays in camping sites by region. All visitors.
Source: Statistics Iceland (n.d.a.).

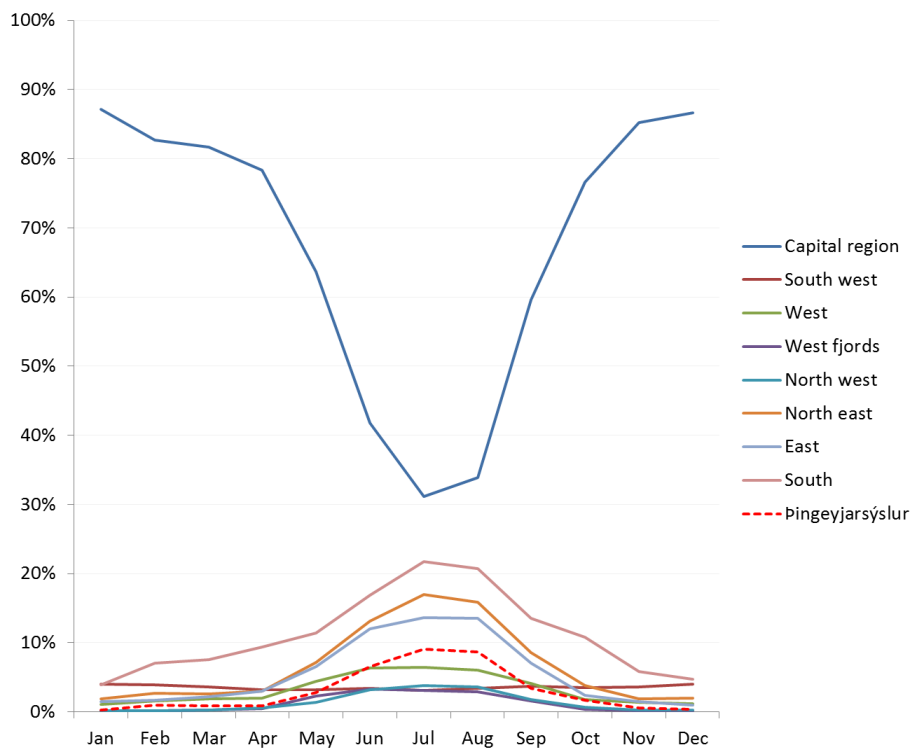


Figure 23. Overnight stays by regions and months. Average numbers for 2005-2014.
Source: Statistics Iceland (n.d.a.; 2014a; 2015a).

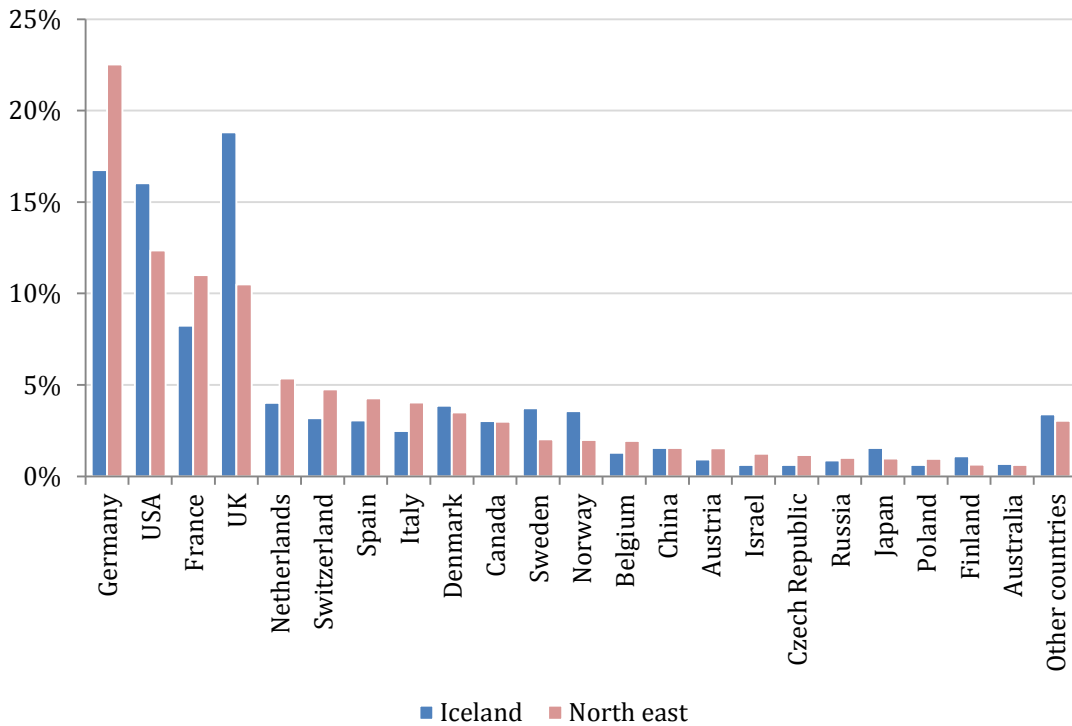


Figure 24. Overnight stays by foreign nationalities in June-August 2014. Ratios in Iceland and North East.
Source: Statistics Iceland (n.d.a).

According to Tourism Research & Consulting the number of inbound tourists staying overnight in Þingeyjarsýslur as a ratio of the total number of inbound visitors to the region¹¹ has decreased in Þingeyjarsýslur over the last few years. In year 2012, 71% of all inbound visitors during the summer time stayed overnight. This ratio was 59% in the summer of 2014 and 41% during winter time in the same year (figure 25).

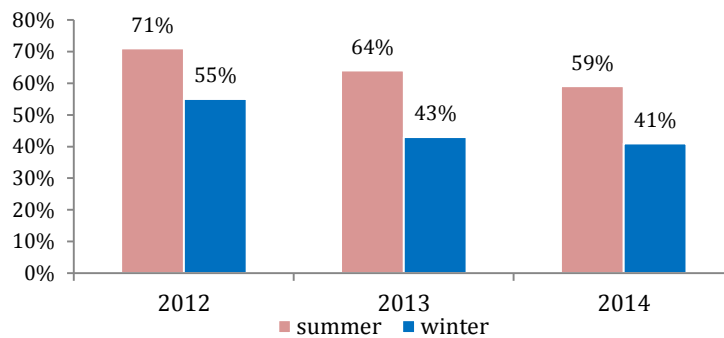


Figure 25. Overnight stay ratio in Þingeyjarsýslur by inbound visitors 2012-2014.
Source: Rögnvaldur Guðmundsson (2015).

¹¹ Cruise passengers excluded.

When these numbers are compared to the accommodation statistics from Statistics Iceland it appears that since 2009 the increase in overnight stays in Þingeyjarsýslur has not followed the increase in inbound visitor numbers to the same extent as the national numbers, which supports the development in the report from TRC. The positive correlation between overnight stays and inbound visitors to Iceland is very strong, or $r = 0,996$ (figure 26), whereas the correlation in Þingeyjarsýslur is $r = 0,969$.

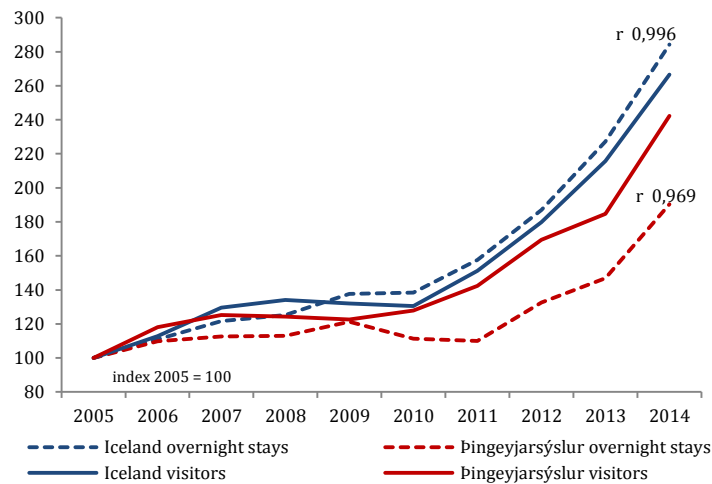


Figure 26. Correlation between inbound overnight stays and inbound visitor numbers to Iceland and Þingeyjarsýslur 2005-2014.

Source: The author's elaboration on data from the Icelandic Tourist Board (n.d.a.), Guðmundsson, (2015) and Statistics Iceland (2014a and 2015a).

The Icelandic Tourism Research Centre has measured and published the seasonal concentration of overnight stays by regions and months by using the Gini Coefficient. The value of the Gini Coefficient ranges from 0 to 1. The value of 1 indicates total concentration, i.e. the region has all its overnight stays in one month, whereas the value of 0 indicates an even distribution of overnight stays throughout the months of the year. The development of the Gini Coefficient in overnight stays in Iceland shows increased distribution by months in almost all regions in year 2012. However, this distribution continues almost solely in the capital area. The problem of seasonal concentration in overnight stays therefore continues in the tourism industry in areas outside the capital area, as presented in table 8 (Icelandic Tourism Research Centre, 2015b).

Table 8. Seasonal concentration of overnight stays by regions and months in Iceland, using the Gini Coefficient

Source: Icelandic Tourism Research Centre (2015b).

Year	Capital Area	Southern Peninsula	West	West Fjords	North West	North East	East	South
1998	0,32	0,44	0,66	0,75	0,78	0,75	0,77	0,72
1999	0,29	0,49	0,70	0,74	0,77	0,74	0,76	0,73
2000	0,28	0,46	0,71	0,75	0,77	0,73	0,76	0,72
2001	0,25	0,36	0,68	0,74	0,76	0,71	0,75	0,72
2002	0,27	0,44	0,70	0,73	0,76	0,73	0,73	0,71
2003	0,27	0,42	0,70	0,74	0,74	0,73	0,73	0,68
2004	0,28	0,41	0,69	0,75	0,75	0,73	0,72	0,68
2005	0,29	0,44	0,65	0,74	0,74	0,72	0,73	0,66
2006	0,27	0,43	0,65	0,71	0,73	0,70	0,69	0,67
2007	0,26	0,42	0,66	0,69	0,75	0,70	0,68	0,66
2008	0,24	0,44	0,65	0,70	0,74	0,71	0,70	0,65
2009	0,27	0,43	0,68	0,70	0,71	0,72	0,71	0,65
2010	0,26	0,43	0,69	0,71	0,71	0,70	0,71	0,62
2011	0,26	0,44	0,66	0,71	0,71	0,70	0,68	0,62
2012	0,20	0,39	0,64	0,66	0,71	0,64	0,67	0,59
2013	0,17	0,36	0,55	0,66	0,67	0,61	0,63	0,53
2014	0,14	0,37	0,55	0,70	0,63	0,60	0,64	0,52
Average	0,25	0,42	0,66	0,72	0,73	0,70	0,71	0,65

The Gini Coefficient for the Northeast region has changed from 0,7 in 2010 to 0,6 in 2014, which is a steeper decline than in the Northwest, the East and the West Fjords. In comparison to other regions it is still relatively high and the seasonality in the tourism industry therefore continues to be a serious concern in Þingeyjarsýslur.

According to the visitor surveys in Húsavík and Mývatnssveit, the average length of stay for those¹² who spent the night in the area was 36 hours in Húsavík and 38 hours in the Lake Mývatn region in 2014. The average length of stay for inbound day visitors (excursionists) was 5,4 hours in Húsavík and 7,2 hours in the Lake Mývatn region.

¹² Inbound tourists exclusively.

4 RESULTS

Due to insufficient regional tourism data in Iceland, the making of a regional TSA is practically impossible in the country. Therefore, this study measures the value of tourism by reconciling the supply and demand data in a set of tourism related industries and the results are mainly retrieved from interviews and visitor surveys in the area of research. This should therefore be considered as an approach of indicating the size of the industry on a regional level (for Þingeyjarsýslur region) and the methods deployed will hopefully be of use in regional strategic decision making and in improving the understanding of the industry on a regional level in Þingeyjarsýslur and elsewhere.

The main monetary aggregates that this study approaches and presents in this chapter are the following:

- Total turnover by detailed industries directly related to tourism in Þingeyjarsýslur 2013.
- Total tourism turnover by detailed industries 2013.
- Regional inbound tourism expenditure by areas 2013.
- Regional internal tourism consumption 2013.
- Regional employment in the tourism industries.

This study approaches the TSA methodology, by using the total turnover by detailed industries 2013 as a proxy to represent the regional production accounts of tourism industries and other industries (at basic prices). These numbers are used to present the scope of the supply side of tourism. Visitor surveys are used to measure tourism consumption from the demand side and these aggregates are then compared and reconciled.

4.1 TOTAL TURNOVER BY DETAILED INDUSTRIES 2013

As described in chapter 2, the tourism characteristic products and tourism characteristic activities are grouped in 12 corresponding categories in the Tourism Satellite Account tables (see Appendix 2). The total turnover by detailed industries in Þingeyjarsýslur in 2013 follows the categorisation from the national Icelandic TSA, aggregated into 6 categories due to the low number of companies in some categories (table 9). What distinguishes this table from the

TSA methodology is that it solely contains companies directly involved in tourism and does therefore not cover the entire ISAT dimension of each tourism category. This affects the total turnover results but should not affect the total tourism turnover which is the main focus of this study.

Table 9. Total tourism turnover in Þingeyjarsýslur 2013 (m. ISK)*

Source: The author's elaboration based on interview data.

	Total turnover	Tourism turnover	Number of companies
Accommodation services	1.655	1.549	33
F&B serving services	393	319	7
Travel agencies and other reservation services	836	802	17
Cultural services & Sport and recreational services & Transportation	1.290	488	14
Goods purchased from trade activities	2.963	800	18
Other services	1.197	714	37
Total	8.335	4.672	126

*Only companies directly involved in tourism are included in this table.

In 2013, the total turnover from industries in Þingeyjarsýslur which were directly involved in tourism was 8.335 m. ISK. Thereof, the estimated tourism turnover was 4.672 m. ISK, where accommodation services presented the largest share (figure 27).

The tourism proportion, the tourism ratio, is the percentage of a sector's turnover which is attributable to tourism demand (Stabler, Papatheodoru, & Sinclair, 2010). However, one should avoid presenting total tourism ratios from table 9 as it only includes companies directly involved in tourism. Turnover from companies with no direct tourism relation should be taken into account as well to allow for comparability with national tourism ratios.

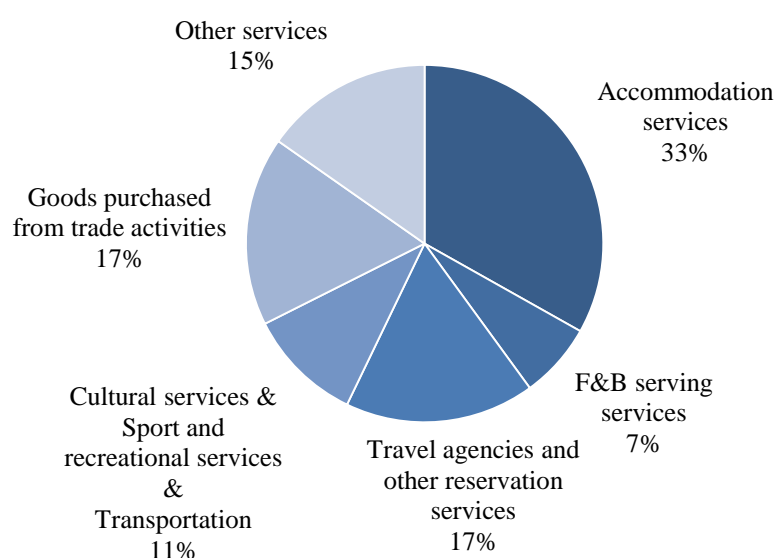


Figure 27. Total tourism turnover in Þingeyjarsýslur by tourism sectors

Source: The author's elaboration based on interview data.

The industry division in figure 27 shows that the accommodation sector is the largest tourism category in terms of tourism turnover in Þingeyjarsýslur. Travel agencies and other reservation services come next, along with goods purchased from trade activities.

According to Statistics Iceland (2015c), 6% of all goods and services supplied in the national economy in 2013 were consumed by tourists. The same ratio was 4,6% in 2009. This ratio is not retrievable on a regional level, due to lack of data. In table 10 and 11, companies with no tourism relation (0% tourism ratio) have been included in the total tourism turnover, enabling the calculation of tourism ratios.¹³

¹³All companies in the accommodation and travel agency categories were directly related to tourism. Therefore companies with no tourism relation (a total of 4 companies) were only added to the F&B serving category in tables 10 and 11.

Table 10. Tourism ratios in Iceland and Þingeyjarsýslur

Source: Frenç (2015b) and the author's elaboration based on interview data.

	Iceland Tourism ratio	Þingeyjarsýslur Tourism ratio
Accommodation services	96,2%	93,6%
F&B serving services	34,8%	72,9%
Travel agency, tour operators and reservation services	100,0%	95,9%

Tourism ratios for other industry categories were not calculated in Þingeyjarsýslur as there was insufficient data for companies with no direct tourism relation within these categories.

The difference between the national and regional tourism ratio in the F&B serving services in table 10 is noteworthy and might be explained by the difference in the F&B environment. In Þingeyjarsýslur, the local F&B market is limited at the same time as a large share of F&B serving services is solely open during the tourism season, resulting in a higher tourism ratio. All companies in the accommodation and travel agency category were directly involved in tourism and the total turnover therefore remains the same in tables 9 and 11 in the accommodation and travel agency categories.

Statistics Iceland regularly publishes total turnover by detailed industries, which can be used for comparison and estimation of the share of Þingeyjarsýslur of the total turnover of the tourism category in Iceland. Data for the following categories is published:

- Accommodation services (solely 55.10.1 and 55.10.2)
- Transport equipment rental (77.11.0 and 77.12.0)
- Travel agency and other reservation services (79.11.0, 79.12.0 and 79.90.0)

(Statistics Iceland, n.d.g.)

However, this information is limited as the data covers only taxable turnover in the tourism industry. The taxing of the tourism industry is complex in Iceland as elsewhere, and tax exemptions and ratios have changed since this study. Tax computations in this research are based on the tax year 2013. Travel-related services that were exempt from VAT during the year of study were the following:

- Travel agencies and tour operator services
- Transportation of passenger, e.g. whale watching, horseback riding, sea angling and snowmobile tours.
- Public transport

(Directorate of internal revenue, n.d.; KPMG, 2013)

This means that only a small share of tourism turnover in the category of travel agencies and reservation services is published. A reliable comparison will therefore not be possible. A comparison for transport equipment rental is not feasible either due to data traceability as there are so few transport equipment rental companies within the region. Therefore, the sole comparison will be in the category of accommodation services and food and beverage services.

Table 11. Total turnover in tourism industries in Iceland and Þingeyjarsýslur 2013

Source: Statistics Iceland (n.d.f.), Frenç (2015b) and the author's elaboration based on interview data.

	Iceland			Þingeyjarsýslur			
	Total turnover m.ISK	Tourism ratio ¹⁴	Tourism turnover m.ISK	Total turnover m.ISK ¹⁵	Tourism ratio	Tourism turnover m.ISK	Þingeyjars. tourism turnover share of Iceland's
Accommodation services	40.313	96,2%	38.781	1.655	93,6%	1.549	4,0%
F&B services	57.756	34,8%	20.099	437	72,9%	319	1,6%

When Þingeyjarsýslur tourism turnover is compared to the corresponding number on the national level, the share of the region is 4,0% of the total. Numbers from Statistics Iceland on overnight stays were used to cross-check this ratio. The total number of overnight stays in Iceland in 2013 was 4.546.383¹⁶ (Statistics Iceland, n.d.a.). In Þingeyjarsýslur the comparable number was 206.808, which represents 4,5% of the total. This shows a certain similarity which supports the results of total tourism turnover in accommodation services. The ratio for food and beverage services is lower, which might either be explained by less visitor spending in this sector when travelling through Þingeyjarsýslur, or partly by lower prices in that region

¹⁴ Retrieved from TSA at national level (Frenç, 2015b).

¹⁵ Turnover from companies with no direct tourism relation included.

¹⁶ Domestic and inbound tourists in all types of accommodation.

compared to the rest of Iceland or the capital region in particular, but these are mere speculations.

4.1.1 Accommodation services

The scope of observation in this sector comprises all tourist accommodation establishments providing short-term accommodation as a paid service (Eurostat, 2012).

Accommodation fulfils the basic need of a visitor to lodge for rest during a tourism trip. It is a core tourism segment although it is solely relevant for overnight visitors. The economic importance of this sector is substantial as it generally accounts for 15 to 20% of the total internal tourism expenditure in EU member countries (Eurostat, 2012).

The accommodation sector in Iceland is highly important to the country's tourism statistics as it is one of the very few tourism sectors which have a history of systematic data gathering and publishing of tourism statistical information.

Tourism accommodation establishments are classified by the following categories in TSA:

- Hotels and similar accommodation, without restaurants (55.10.1)
- Hotels and similar accommodation, with restaurants (55.10.2)
- Holiday and other short-stay accommodation (55.20.0)
- Camping grounds, recreational vehicle parks and trailer parks (55.30.0)¹⁷
- Other accommodation (55.90.0)

(Eurostat, 2012; Frenț, 2013; United Nations, 2010b)

During the year of study (2013) there were 71 accommodation establishments in the area, providing 908 rooms and 2.026 beds. These numbers present the capacity of all accommodation establishments in the area, except for camping places, regardless of their availability at each point in time. The supply numbers from Statistics Iceland are slightly lower as they subtract rooms that are not for sale at each time, for reasons such as renovations, temporary closing of establishment etc. Figure 28 demonstrates the development in these numbers for the region of study, showing an increase of 29% in rooms and 28% in beds, and a 41% increase in the number of establishments between 2013 and 2015. However, the average size of an establishment has decreased from 12,8 rooms and 28,5 beds per establishment

¹⁷ Municipally run campsites are excluded from the total numbers in this study due to lack of information.

to 11,7 rooms and 25,9 beds per establishment. This development is interesting given that some of the larger accommodation providers in the study region have been expanding during this period.

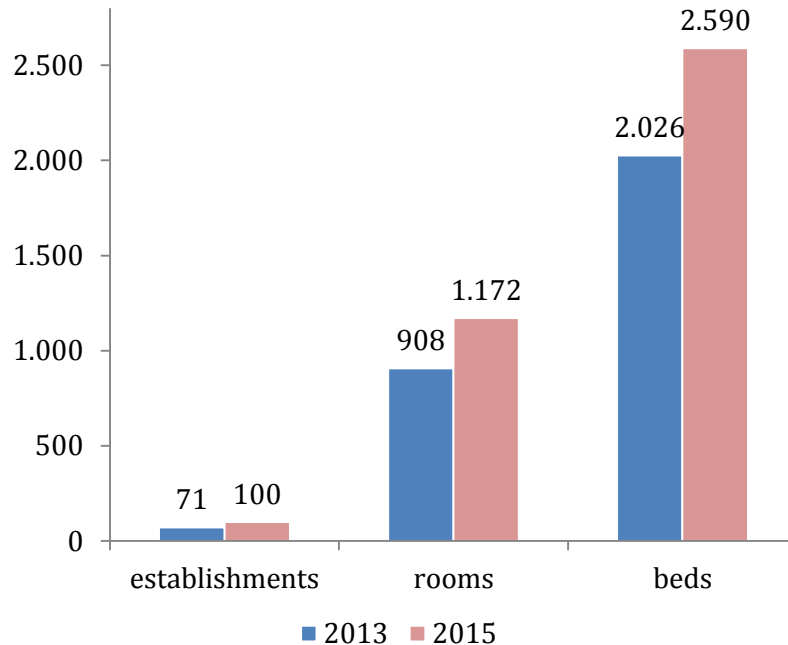


Figure 28. Number of accommodation establishments, rooms and beds in Píngeyjarsýslur in 2013 and 2015

Source: AirBnB (n.d.), Visit North Iceland (n.d) and the author’s elaboration based on interview data.

Whilst the more established providers have been expanding, numerous smaller accommodation services have sprung up such as in the private accommodation and the AirBnB sector, which are included in these numbers. Figure 29 demonstrates the development in the AirBnB sector in Píngeyjarsýslur, showing a growth from 3 members in 2013 to 30 members in 2015. AirBnB’s share in the total accommodation supply has therefore risen from 0,7% to 7,4% during this period. The AirBnB database is mutable showing immediate changes in registration at each point of time and the numbers might therefore differ by periods of the year.¹⁸

According to a recent study on the private accommodation sector in Iceland, approximately 4% of all private apartments in Reykjavík are listed on AirBnB (Ólafsson, Steinsson, Hafsteinsson, Aðalsteinsson, & Guðmundsson, 2015). In Píngeyjarsýslur, this ratio is lower, or 1,35% in 2015 (AirBnB, n.d.; Registers Iceland, n.d.).

¹⁸ This statistic is from Dec 2015, showing the number of registered AirBnB members and their time of membership registration.

AirBnB plays a big role in the *sharing economy*, where individuals with underused assets, such as spare rooms or a spare car, use the internet to find people interested in borrowing or renting these assets (Economist, 2013, 2014; Jónsson & Huijbens, 2014). The rise of the sharing economy has somewhat met the increased demand of tourism services in the region. However, this system is receiving critique, e.g. on account of regulatory uncertainty around the operations. As figure 29 demonstrates, the effects for 2013 are minimal, but at the current rate of growth it might affect figures in the very near future.

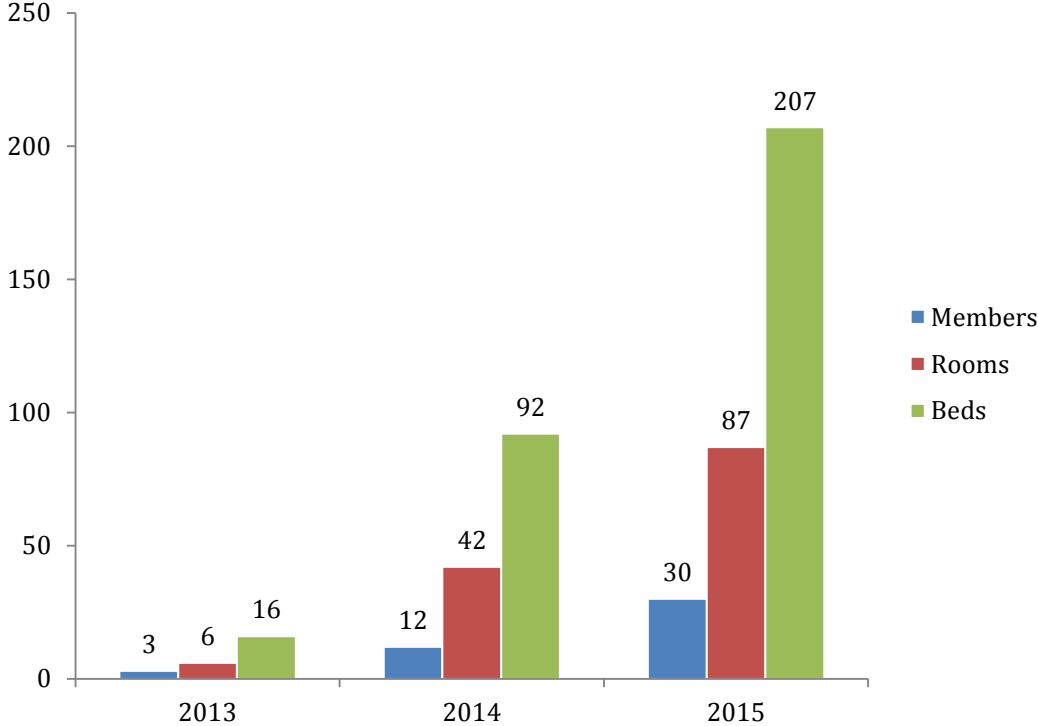


Figure 29. AirBnB accommodation supply in Píngeyjarsýslur 2013-2015
Source: AirBnB (n.d.).

As described before, the accommodation sector counts legal entities, with ISAT registration numbers 55.10.1, 55.10.2, 55.20.0, 55.30.0 and 55.90.0. Out of the 71 accommodation establishments in Píngeyjasýslur in 2013, only 35 (including 654 rooms and 1.417 beds) count within this registration. The remaining accommodation establishments (36) are classified within other industry sectors such as agriculture, fishing, retail industry, travel agencies and booking services, and their turnover therefore belongs to other categories than accommodation.

The total revenues from the above ISAT numbers are 1.655 million ISK. The estimated tourism ratio is 93,6% resulting in total tourism revenues of 1.549 million ISK of this sector.

More information about accommodation in the region is to be found in chapter 3 on accommodation statistics in the region.

4.1.2 Food- and beverage-serving services

As in the case of accommodation, the food and beverage industry fulfils a basic need of a visitor. F&B outlets consist of a broad range of services such as fast food services, restaurants, pubs, bars and clubs. They can also be part of other services such as accommodation, recreation and retail industry as well as standing alone (Eurostat, 2012). Therefore, a considerable share of F&B serving services counts in other tourism categories in this study.

Generally, F&B services serve both visitors and local residents. In some cases, as in highly populated cities, the locals might represent the majority of customers whereas in less populated tourist destinations the restaurants might be more dependent on visitors. This is the case in Þingeyjarsýslur where numerous F&B services are only open during the tourism season resulting in a higher tourism ratio, as demonstrated in table 11.

The F&B serving sector consists of the following three categories:

- Restaurants and mobile food service activities (56.10.0)
- Other food service activities (56.29.0)
- Beverage serving activities (56.30.0)

(Frenț, 2013; United Nations, 2010b)

Eleven entities are registered within this sector in Þingeyjarsýslur, thereof seven with a direct tourism relation and a total tourism turnover of 319 million ISK.

4.1.3 Travel agencies and other reservation services

Travel agencies provide information and other services to visitors when planning a trip. They often function as an intermediary in the purchase of certain services such as accommodation, transport, recreation activities, etc. Also, travel agencies in some cases provide additional services themselves, such as various tours, guiding services, etc. (United Nations, 2010a).

This category consists of the following three subcategories:

- Travel agency activities (79.11.0)
- Tour operator activities (79.12.0)
- Other reservation service and related activities (79.90.0)

(Frenç, 2013; United Nations, 2010b)

Travel agencies and other reservation services are under specific jurisdiction of most national tourism administrations and in Iceland they function under Act no. 73, 24 May 2005 on Tourism Administration, Article 7 (Ministry of Industries and Innovation, n.d.; United Nations, 2010a). In this Act **travel agencies** are defined as the following:

a party, either an individual or a legal entity, who, either on his own initiative or at the request of a customer, organises, offers, and sells package tours professionally, either in Iceland or abroad.

A travel agency may also handle and offer all travel-related services offered by a tour operator, whether these are provided in the form of package tours or not.

The term “travel agency” refers both to tourism wholesalers and to tourism retailers pursuant to Act no. 80/1994 on Package Tours

(Ministry of Industries and Innovation, n.d.).

Tour operators are defined in the following way in the same Act:

tour operator shall refer to a party, either an individual or a legal entity, who, either on his own initiative or at the request of a customer, organises, offers, and sells professionally the following tourism-related services to the public:

- a. The organisation and sale of tours to groups and individuals, and the organisation of tours, stays, and leisure-time activities, both in Iceland and abroad.
- b. The organisation of meetings, exhibitions, and conferences and any services related thereto, both in Iceland and abroad.
- c. Any sort of agency retailing or resale of tickets for travel by ship, automobile, aircraft, or railway.
- d. Leisure-time activities, such as horseback-riding tours, snowmobile tours, river rafting tours, and adventure tours using specially equipped motor vehicles.
- e. Travel and refreshments as a part of services rendered.

(Ministry of Industries and Innovation, n.d.).

Furthermore, **booking services** are defined by the same Act as:

the operation of all types of booking services offered to the public, to tour operators, and to travel agencies, whether within Iceland or abroad; this shall include electronic booking services (Ministry of Industries and Innovation, n.d.).

To run a tour operation or a travel agency in Iceland, one must apply for a license by the Icelandic Tourist Board. For booking services, a registration certificate is necessary (Icelandic Tourist Board, n.d.b.). As can be seen from the above definitions, travel agencies and other reservation services cover a wide array of tourism services. Within the study area, the whale watching industry, sport fishing industry, horse tourism and accommodation services which function also as tour operators fit the category. These subsectors are discussed in the following sections.

Whale watching

Whale watching in Húsavík has become one of the main attractions in the research area. The Skjálfandi Bay is known for its rich wildlife where whales play an important role. The whale watching industry has experienced a substantial growth in Húsavík from its very start in 1995 (Rasmussen, 2014), and during the summer of 2015 the total number of whale watchers reached 89.500 (figure 30). The whale watching industry has also experienced a rapid growth countrywise and in 2015 the total number of whale watching passengers exceeded 272.000, whereof Húsavík held a 33% share (Anderson, Gothall, & Wende, 2014; Huijbens, 2013; Icelandic Whale Watching Associations, 2016). Húsavík has been branded the “Whale capital of Iceland”, emphasising the accessibility to a number of whale species in the Bay, along with the great odds of seeing whales sustained by the Bay’s thriving ecosystem (Visit Húsavík, n.d.). In Skjálfandi Bay the most commonly seen species are humpback whales, minke whales and blue whales. Other species are e.g. white beaked dolphins and harbour porpoises. The total number of whale watching boats in Skjálfandi bay was sixteen during the summer of 2015, thereof three schooners and five RIB boats. Two of these schooners operated in Greenland during the peak of the season but the other boats were mainly located in Skjálfandi bay and surroundings. The total number of advertised tours per day in Skjálfandi Bay was 39 during the peak season of 2015.

According to the Icelandic Tourist Board visitor survey (2014b), 28% of all foreign visitors to the country paid for a whale watching tour during the summer of 2014. In Húsavík specifically, whale watching expenses represented over 40% of total tourism expenditure in the area in the summers of 2013 and 2014 (Rögnvaldsdóttir, 2014).

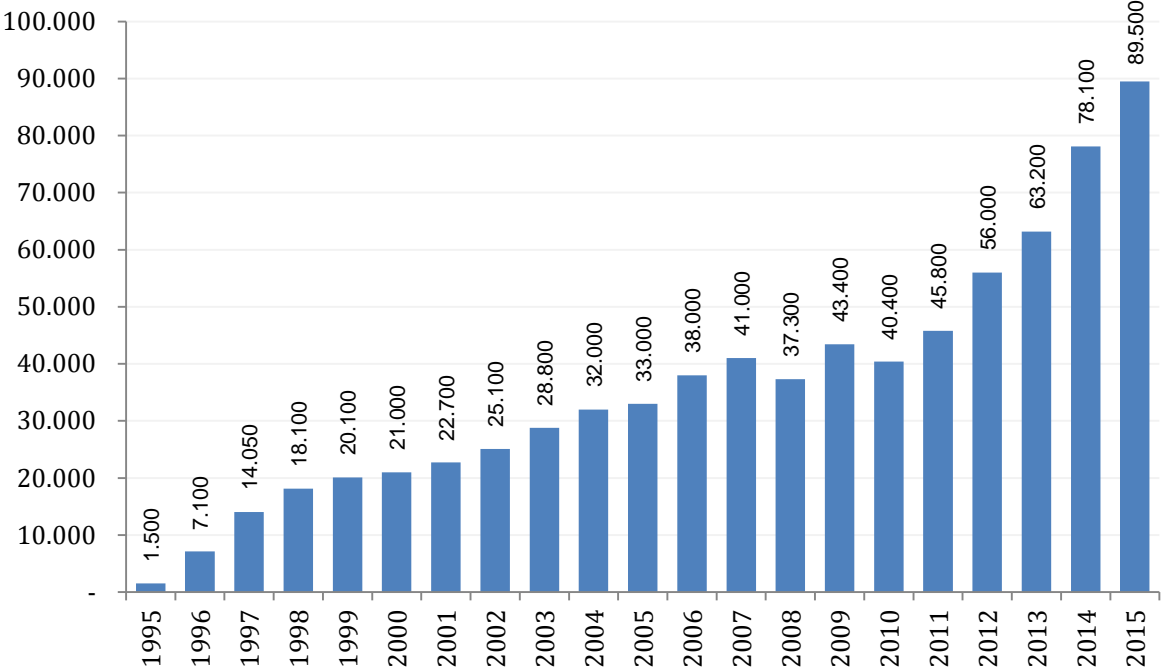


Figure 30. Number of whale watchers in Húsavík 1995-2015
Source: The author’s elaboration on data from the local whale watching companies.

Since 1995, a total of five companies have offered whale watching tours in Húsavík, the last one starting in the summer of 2015. The whale watching season now starts in March and ends in November. Figure 31 presents the total number of whale watching passengers in Iceland from 1995 to 2014, categorised by three regions; the capital area, Húsavík and other areas.

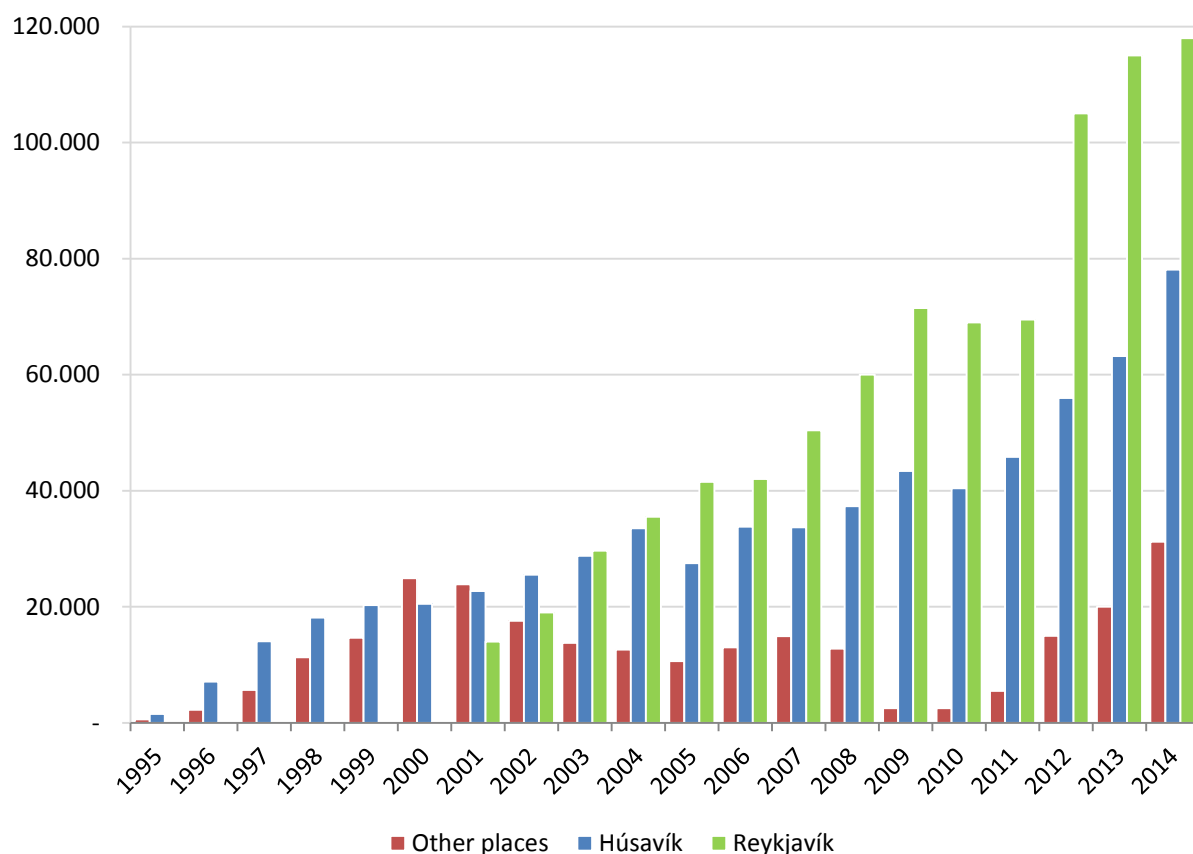


Figure 31. Number of whale watchers in Iceland per region 1995-2014

Source: Icelandic Whale Watching Associations, (2014, 2015) and the author's elaboration on data from the local whale watching companies.

The average annual growth rate (AAGR) of whale watchers during a ten year period (2005-2014) was 10% in Húsavík whilst it was 14% in the capital area. The rate of growth has been increasing in the last few years in tandem with growing visitor numbers to the country.

Table 12. The average annual growth rate of whale watchers per region and time period

Source: Icelandic Whale Watching Associations (2016) and the author's elaboration on data from the local whale watching companies.

Region	10 years 2005-2014	5 years 2010-2014	3 years 2012-2014
Húsavík	10%	13%	20%
Reykjavík	14%	12%	21%
Iceland in total	11%	15%	24%

Equestrian tourism

Equestrian tourism or horse tourism is a growing sector of the Icelandic tourism industry. The Icelandic horse is renowned worldwide for its characteristics; the small size and colour diversity as well as its five gaits. The equestrian tourists in Iceland are often owners or admirers of the Icelandic horse worldwide, visiting the homeland of the horse breed they merit (Helgadóttir & Dashper, 2016; Helgadóttir & Sigurðardóttir, 2008; Sigurðardóttir & Helgadóttir, 2015).

Companies in the study area catering to this type of tourism offer two distinct tourism products. The former, horse trekking, is a trip that takes more than 24 hours whereas the latter, horse rental, is shorter. Tourists participating in horse trekking make the purchase decision with much longer notice than tourists buying services from a horse rental. The average purchase decision notice for horse trekking in Iceland is six months whereas it is about 24 hours in the case of a horse rental (Sigurðardóttir & Helgadóttir, 2015).

The Icelandic horse has long been trained for travelling through uneven grounds, which makes it ideal for horse trekking in Iceland. In Þingeyjarsýslur, horse trekking has grown in popularity as in other places around Iceland in the last few years (Helgadóttir & Sigurðardóttir, 2008). In 2015 it is estimated that approximately 400 visitors participated in horse trekking in Þingeyjarsýslur. This number accounts for visitors of horse tourism companies with establishments in the research area. More visitors participate in horse trekking within the area, operated by companies with establishments outside of the area, and are therefore not counted in these numbers.

Horse trekking visitors are highly valuable to the regional economy as they stay longer in the area than the average visitor and their total expenses in the region are generally higher. The average length of the trekking is six days, and it includes full service, e.g. accommodation, food and beverage services as well as other recreational services which often are part of the trekking. The estimated number of overnight stays in the area from horse trekking tourists was therefore approximately 2.400 in 2015.

Information on the number of horse rental visitors is limited and no specific numbers in this regard are presented in this study.

Sport fishing

Pingeyjarsýslur boast some of the most popular salmon and trout fishing rivers in Iceland and sport fishing has become a very popular and expensive sport in the area. Statistics Iceland gathers data on salmon caught, categorised by fishing gear used in Icelandic rivers each year. These numbers are categorised within the agriculture sector under hunting, along with the hunting of puffin, reindeer, geese, etc. (Statistics Iceland, n.d.b.). However, when measuring the total turnover of the sport fishing industry, the angling clubs and lease holders are most often categorised within the Tourism industry sector under sport and recreational services, travel agency activities and accommodation services in the ISAT2008 system.

The sport fishing category was not measured through interview estimates in this study. The reason is the complex system of landowners and lease holders selling fishing permits to the rivers in Pingeyjarsýslur. The lease holders can be located all around the country and even abroad, leasing only few rods for assorted rivers countrywide. In addition, a group of specified fishing tour operators also sell fishing permits to a number of different rivers in cooperation with the lease holders. Therefore, information on the total turnover in this industry was not found by interviewing each seller of fishing permits, but by calculating permit prices by the number of rods and the length of period in each river in the area. Attention was paid to the price fluctuations by periods as price lists were in most cases official on the web sites of the lease holders. Some prices were obtained directly from the lease holders along with additional information.

Other sources of revenues are from accommodation services and guiding fishers in the research area. The leasing revenues to landowners from lease holders do not count as direct revenues and are therefore not counted in this research.

When measuring regional impacts of sport fishing, only revenues generated by companies with an *establishment* in the research area were counted. Therefore, a considerable share of the total turnover of the sport fishing industry is excluded from these calculations.

4.1.4 Transportation and transport equipment rental

As respondents are too few to ensure anonymity, transportation and transport equipment rental have been aggregated with cultural services and sport and recreational services. Transportation entails road, water and air passenger transportation. More specifically, the ISAT classifications within these three transport categories are the following:

- Taxi operation (49.32.0)
- Other passenger land transport not elsewhere classified (n.e.c.) (49.39.0)
- Sea and coastal passenger water transport (50.10.0)
- Inland passenger water transport (50.30.0)
- Scheduled air transport (51.10.1)
- Non-scheduled air transport (51.10.2)

(Frenč, 2013; United Nations, 2010b)

The criterion for calculating tourism revenues in the area of research is that the tourism company has to have an establishment in the region of study. This excludes the numerous bus companies in the neighbouring areas that transport day visitors around Þingeyjarsýslur. In the summer of 2013, the estimated number of cruise ship passengers solely, being transported with busses from the Akureyri based bus company, SBA Norðurleið, through Þingeyjarsýslur, was 41.200. The vast majority of these tours were made to explore the region of Lake Mývatn (Huijbens & Gunnarsson, 2014).

The number of air transport passengers that went through Húsavík airport in 2013 was 9.893 and the same number for 2014 was 9.464.¹⁹ Eagle Air operates scheduled flights between Reykjavík and Húsavík. In Þórshöfn, Air Iceland operates scheduled flights between Reykjavík and Þórshöfn, via Akureyri, in collaboration with NorlandAir. The number of passengers going through the airport in Þórshöfn in 2014 was 718 (Isavia, 2014, 2015). The estimated tourist ratio in Húsavík was 20%, resulting in approximately 1.900 visitors going through the airport in 2013 and 2014. This ratio has not been estimated for Þórshöfn.

At Lake Mývatn an airstrip is operated mainly for non-scheduled sightseeing flights for tourists around Lake Mývatn and surroundings during the summer months.

¹⁹ Arrivals and departures in Húsavík both included.

The renting and leasing of cars and light motor vehicles does not cover car rentals with establishments outside of the area. The ISAT number in this category is 77.11.0 for cars and light motor vehicles and 77.12.0 for trucks.

Only five companies belong to the category of transportation and transport equipment rental and the turnover is therefore presented with cultural services and sport and recreational services to avoid traceability.

4.1.5 Cultural services

This category consists of

the operation of facilities and provision of services to meet the cultural and entertainment interests of their customers. This includes the production and promotion of, and participation in, live performances, events or exhibits intended for public viewing; the provision of artistic, creative or technical skills for the production of artistic products and live performances (United Nations, 2010a, p. 117-118).

The ISAT 2008 classification for this category is the following:

- Performing arts (90.01.0)
- Support activities to performing arts (90.02.0)
- Artistic creation (90.03.0)
- Operation of arts facilities (90.04.0)
- Museums activities (91.02.0)
- Operation of historical sites and buildings and similar visitor attractions (91.03.0)
- Botanical and zoological gardens and nature reserves activities (91.04.0) (Frenč, 2013; United Nations, 2010b)

There are numerous museums, theatres and clubs in the study area, which partly serve visitors and partly locals. The local museums often serve the role of collecting, preserving and sharing artefacts and collections of cultural, historical, artistic or scientific importance for the society through permanent or temporary exhibits. They are generally non-profit organisations, funded by government grants, private donations and earned revenue such as admission fees, which generally is a minor source of income. The whale museum in Húsavík and the bird museum at Lake Mývatn have developed a tourism focus and receive more visits from tourists and same-day visitors than other museums in the area.

Theatres in the research area are amateur theatres which rarely stage a performance during the tourism season. Their turnover has not been taken into consideration in this study.

Only five entities belong to this category and the turnover has therefore been aggregated with the sport and recreational services in this study to prevent traceability of data.

4.1.6 Sport and recreational services

Recreation is often defined as “all activities that are undertaken voluntarily for personal pleasure or enjoyment in a person’s leisure time” (Nagle, 1999, p. 2). In the case of tourism one might therefore think that this category would cover a wide range of tourism services. However, in the case of tourism statistics, this category does not cover as large a share of tourism services as the title of the subchapter might indicate. It consists of the following subcategories:

- Renting and leasing of recreational and sports goods (77.21.0)
- Gambling and betting activities (92.00.0)
- Operation of sports facilities (93.11.0)
- Fitness facilities (93.13.0)
- Other sports activities (93.19.0)
- Activities of amusement parks and theme parks (93.21.0)
- Other amusement and recreation activities (93.29.0)

(Frenç, 2013; United Nations, 2010b)

In this study, this category initially consisted of 14 associations, most of them local sports clubs such as soccer and athlete associations. These entities have no connections to tourism and were therefore excluded. Golf clubs and fishing clubs were taken into calculations, along with cultural services. The results of four companies are presented with cultural services to prevent data traceability.

4.1.7 Goods purchased from trade activities

The categories listed from 3.1.1 to 3.1.6 all belong to *tourism characteristic products and industries* (see table 1).

Goods purchased from trade activities covers *other consumption products, particularly referring to goods*, partly purchased by visitors. These are e.g. retail outlets, such as grocery stores, clothes stores, sports stores etc. According to the Icelandic TSA, this category consists of the following subcategories:

- Wholesale trade (46.00)
- Retail sale (47.00)

(Frenț, 2013)

This sector counts 18 entities with direct relation to tourism and a total turnover of 2.963 m. ISK, whereof 800 m. ISK comes from tourism.

4.1.8 Other services

This category includes all other industries providing services to tourists (Frenț, 2013). This is for example tourism activities such as accommodation and recreational services, registered by Statistics Iceland within other ISAT classification categories mentioned in the previous sections. These industries are e.g. agriculture, fishing, construction, activities of other membership organisations and physical wellbeing activities. Therefore, this category includes numerous tourism entities which offer services described in the previously described tourism categories, but do not fit into the classification due to different ISAT registration. The total number of companies in this category is 37, with a total turnover of 1.197 m. ISK, whereof 714 m. ISK comes from tourism.

4.2 INTERNAL TOURISM CONSUMPTION

The internal tourism consumption by products is another outcome of the study. It comprises the consumption of both resident (*domestic*) and non-resident (*inbound*) visitors within the region of study. Tourism consumption has the same definition as tourism expenditure but with the addition of services associated with vacation accommodation on own account, tourism social transfers in kind and other imputed consumption (United Nations, 2010b). No information was available on the vacation accommodation on own account and on other

elements of tourism consumption in the region and therefore tourism expenditure and tourism consumption is the same aggregate in this study.

The supply side approach with outcomes tallied in chapter 4.1 was used in this study to measure the internal consumption in Þingeyjarsýslur. Total tourism turnover retrieved from the company interviews was complemented with Value Added Tax to present the total internal tourism consumption, at purchasers’ prices. The average taxation used for calculation was retrieved from the production accounts of tourism and other industries on the national level in 2013 (Statistics Iceland, n.d.e.). The results are listed in table 13.

Table 13. Estimated internal tourism consumption in Þingeyjarsýslur in 2013 (based on supply side calculation on tourism turnover).
Source: Statistics Iceland (n.d.f.) and the author’s elaboration based on interview data.

	Total tourism consumption
Accommodation services	1.662
F&B serving services	346
Travel agencies and other reservation services	806
Cultural services & Sport and recreational services & Transportation	498
Goods purchased from trade activities	911
Other services	747
Total	4.971

Visitor surveys are generally used to measure tourism consumption from the demand side. The tourism consumption is then compared to the total output of the tourism industries in order to calculate the tourist ratio (United Nations, 2010b).

In this study, tourism consumption from the demand side²⁰ (table 14) is based on visitor surveys conducted in Húsavík and in the region of Lake Mývatn during the summer of 2013. A total of 451 visitors responded to the survey in the region of Lake Mývatn and 469 in Húsavík. The questions were restricted to a period of 24 hours. Those who stayed shorter estimated the expenditure during their stay in the area and those who stayed longer were asked to limit their expenditure estimate to 24 hours. The average expenditure was then

²⁰ Inbound tourism expenditure

multiplied by the estimated number of inbound visitors in the region to measure the total inbound consumption in the two areas in 2013.

Table 14. Estimated inbound tourism consumption in Húsavík and in the region of Lake Mývatn in 2013
Source: Rögnvaldsdóttir, (2014) and the author's elaboration based on visitor survey results in the region of Lake Mývatn in 2013 (unpublished).

	Average 24h expenditure ²¹	Visitor numbers in 2013	Total inbound consumption in 2013 ('000 ISK)
The Mývatn region	10.678	190.000	2.028.820
Húsavík	15.785	124.848 ²²	1.970.726
Total:			3.999.546

The total inbound consumption in the two areas, according to the visitor surveys, is estimated 4.000 m. ISK (table 14). The difference between the inbound tourism consumption in table 14 (demand side derived) and the internal tourism consumption²³ in table 13 (supply side derived) is 971 m. ISK or 19,5% of total internal consumption. This difference might partly be explained by regional inbound tourism consumption in other areas than Mývatn and Húsavík, as well as by domestic tourism consumption in the whole region. It is estimated that 29% of all visitors to Þingeyjarsýslur in 2014 were domestic visitors (Guðmundsson, 2015), which is still slightly higher than the difference.

²¹ On the price level of 2013.

²² Cruise ship passengers in Húsavík are included in the visitor numbers.

²³ Internal tourism consumption comprises both domestic and inbound visitors' consumption

4.3 TOURISM EMPLOYMENT IN ÞINGEYJARSÝSLUR 2013

Measuring tourism employment can be complicated due to seasonality, high variability in the working environment, flexibility and, sometimes, a lack of formal work contracts (United Nations, 2010a).

Industries depend to a different degree on tourism. Figure 32 demonstrates how industries defined as “tourism industries” both serve the needs of visitors and locals and therefore only a share of their employment can be linked to tourism. The total number of tourism employees is retrieved by relating tourism demand to tourism supply, using the tourism ratio to calculate the tourism share of total employment in the 12 corresponding industries (OECD, 2000).

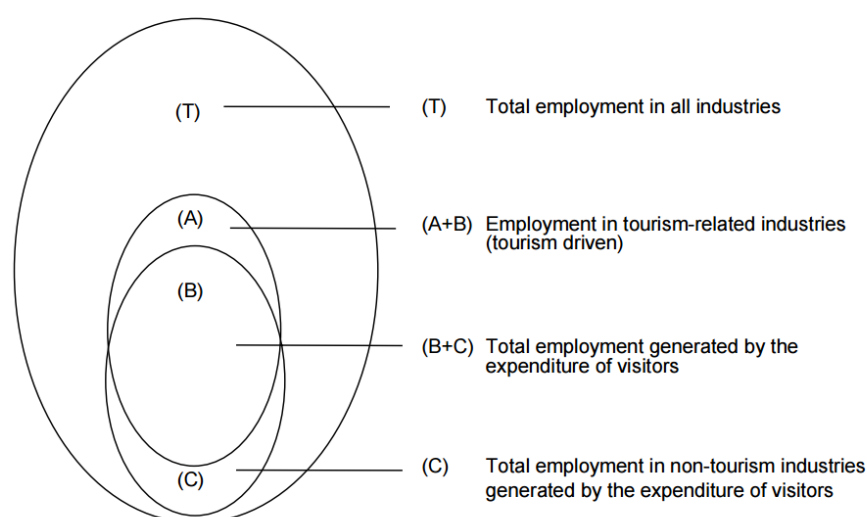


Figure 32. The boundaries of tourism-related employment and total employment generated by the expenditure of visitors

Source: OECD (2000, p. 155).

In this study, each company was asked to provide information on the number of employees and Full Time Equivalent (FTE) depending on the season as well as the total Annual Work Units (AWU)²⁴. This number was then multiplied with the tourism ratio provided by the companies.

The results from the interviews showed that the total number of AWU in tourism in Þingeyjarsýslur was 313 in 2013. The total number of tourism employees was 856 during the same period. The total number of FTEs during the summer of 2013 was 749 and 151 during

²⁴ AWU is equivalent to the work of one person, full time, for one year

the winter. The total salary cost in the study was 1.971 m. ISK, whereof salaries directly related to tourism were 1.436 m. ISK.²⁵ The average monthly salary in 2013 was estimated to be 324 thousand ISK. The ratio of AWUs with registered domicile within Þingeyjarsýslur was 82%.

Table 15. Tourism employment numbers in Þingeyjarsýslur 2013

Source: The author's elaboration based on interview data.

	Employees summer (FTE)	Employees winter (FTE)	Annual Work Units (AWU)
Accommodation services	343	45	131
F&B serving services & Transportation	115	27	50
Travel agencies and other reservation services	105	27	46
Cultural services & Sport and recreational services	27	2	5
Goods purchased from trade activities	53	31	37
Other services	106	18	42
Total	749	151	313

The total number of tourism employees on the national level was at the same time 15.260 (ranging from 12.600 in January up to 18.400 in August) (Statistics Iceland, n.d.d.). According to these numbers, the share of Þingeyjarsýslur was 4,7% during summertime²⁶.

Figures from the Northeast Iceland Development Agency (NIDA) are used in this study to show the development of total employment in the region and the share of each industry (figure 33). NIDA's industry categorisation differs from this study in that all employees within the accommodation and F&B industry as well as all employees in the travel agencies and tour operator services are counted in NIDA's classification whereas this study follows the UNWTO methodology, using tourism ratios to estimate employment numbers from the twelve defined tourism industries in this study. In 2007, the total number of annual work units (AWU) in all industries in the region was 2.201.²⁷ The same number for 2014 was 2.141

²⁵ Wages and related expenses. The tax base was 1.217 m. ISK.

²⁶ Employment numbers for comparison are based on averages in Iceland June-August 2013. Total employment numbers for Þingeyjarsýslur during the wintertime are unknown (only FTEs were computed).

²⁷ The numbers of FTE are counted during the summer and in December each year. Annual Work Unit is retrieved by multiplying the number of FTE during the summer with 3 and with 9 during the winter. Both numbers are then divided by 12. AWUs in 2013 were 2.113.

which represents a 2,7% reduction. All industries have lost AWUs except agriculture (increase of 4%), public services (increase of 0,4%) and tourism (50% increase). The loss in the other industries ranged from -4% to -28% (Northeast Iceland Development Agency, 2015).

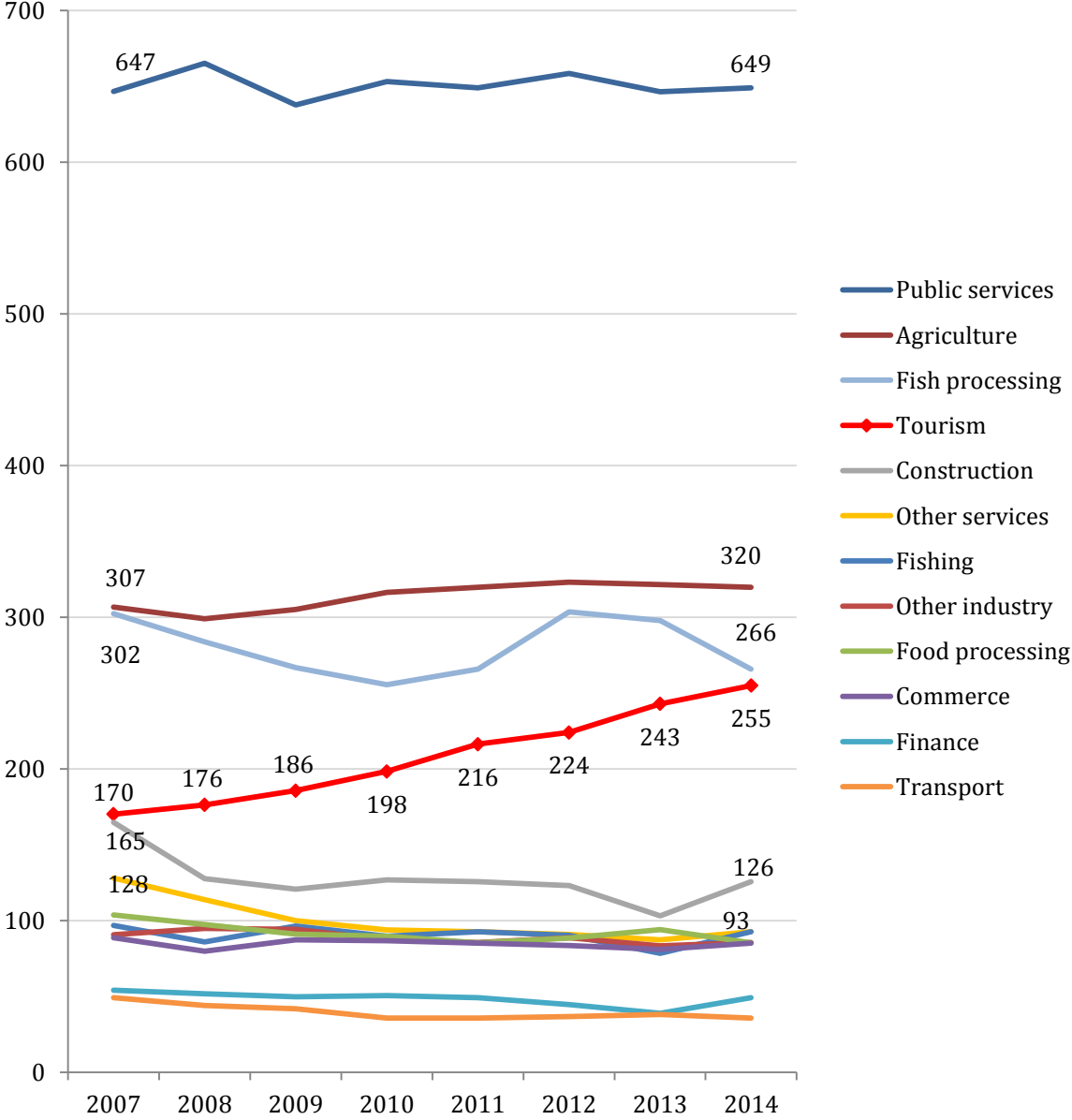


Figure 33. Employment development in Þingeyjarsýslur 2006-2014. AWUs per category
Source: Northeast Iceland Development Agency (2015).

Figure 34 shows tourism employment in Þingeyjarsýslur in the winter and summer season according to NIDA. In 2014, the total number of AWU was 255 in the tourism industry. During the summer, this number rose to 575 while it decreased to 148 during the wintertime (Northeast Iceland Development Agency, 2015).

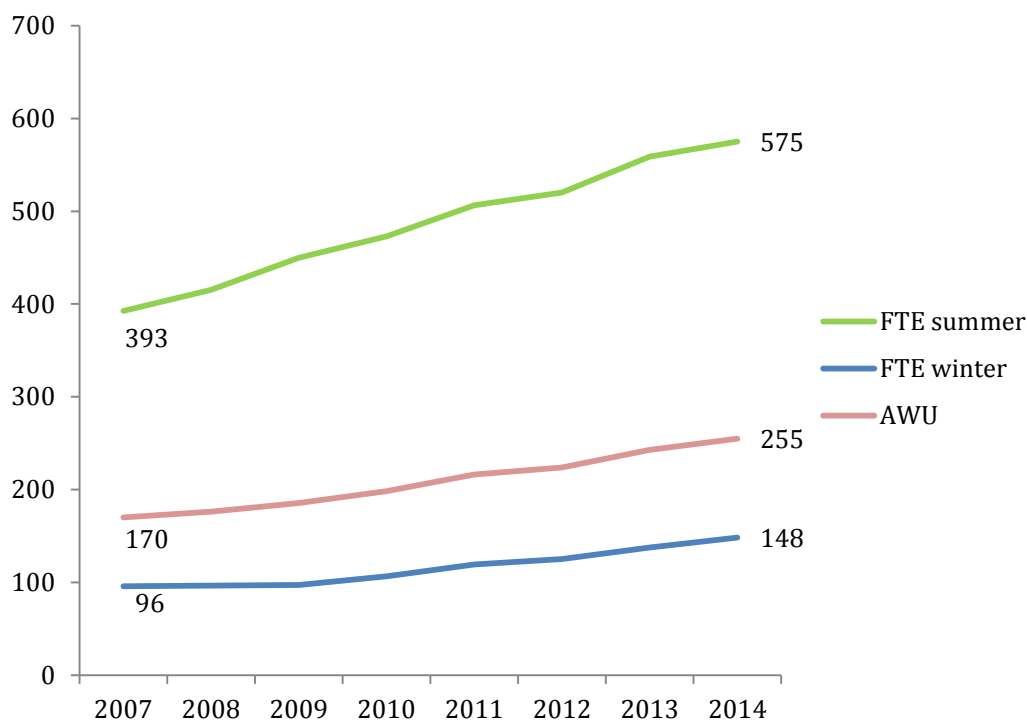


Figure 34. AWUs and FTEs in the tourism industry. Þingeyjarsýslur 2007-2014

Source: Northeast Iceland Development Agency (2015).

The tourism seasonality clearly affects the employment in the region and creates challenges in the management of the industry. This is common in peripheral destinations and calls for strategic planning and implementation in the industry.

The difference in employment numbers between NIDA's counting and the TSA methodology, which this study is based on, shows that the latter is more complete and includes higher numbers of employees as it refers to more categories than the three tourism industries in NIDA's method.

5 TOWARDS OTHER ESTIMATIONS FROM THE STUDY

The main emphasis in this study has been on measuring the *direct effects* of tourism according to the International recommendations for compiling TSAs. The direct effects represent “the purchases of goods and services by or on behalf of visitors, i.e. expenditures incurred before, during, and after a trip and expenditures that are related to the trip itself” (Smeral, 2006, p. 94). The TSA methodology is essential for attaining the most accurate tourism statistics. It is therefore important to base further calculations on this framework. Indirect effects can be estimated through different interrelated indicators that can be developed from the TSA methodology in combination with other instruments relating to value added, employment, remuneration of employees, gross business income etc. (United Nations, 2010b; Vellas, 2011). When measuring the indirect effects of tourism it is important to carefully consider table 6 in the 2008 TSA:RMF. Although no concrete aggregates can be immediately calculated from this table, it contains important elements such as intermediate consumption by tourism sectors and compensation of employees, providing the base for measuring the indirect and induced effects of tourism (Vellas, 2011). However, as already stated, data sources to compile regional TSAs in Iceland do not exist.

5.1 INDIRECT AND INDUCED EFFECTS

Tourism creates demand in a broad array of economic sectors. This demand can be met either within or outside the region, depending on the capability of the local economy. An autonomous rise in demand in the tourism industry calls for production and services from the delivering industry. This generates a need for goods and services in the delivering industry which then results in a multiplier process that generates direct and indirect income as well as employment. The chain of *indirect effects* of tourism consumption on other industries is due to industry *linkages*. These linkages are between tourism serving industries and other industries which serve tourism with intermediate goods and services. This chain of additional demand for different factors continues through several rounds until depleted by *leakages* which are mainly imports and savings (figure 35) (Lejárraga & Walkenhorst, 2010; Smeral, 2006; United Nations, 2010b).

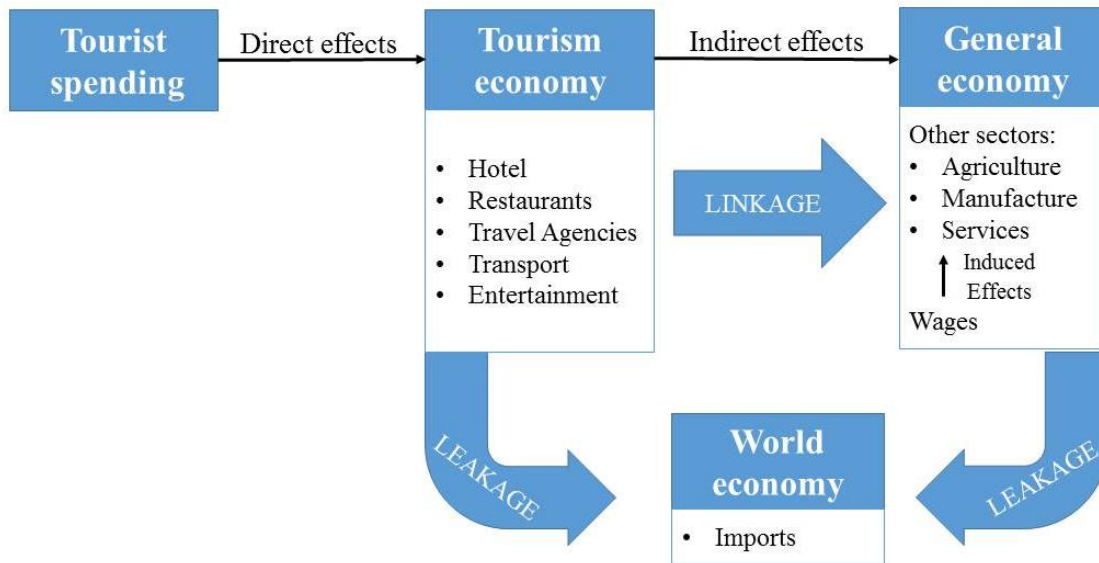


Figure 35. Effects of tourism: direct, indirect and induced
 Source: Lejárraga and Walkenhorst (2010, p. 418).

There are three main methods used to estimate the indirect and induced effects of tourism:

- Models based on Input-Output analysis
- Computable general equilibrium models
- Multipliers (United Nations, 2010b)

Input – Output analysis

Input-output tables demonstrate a detailed segmentation of intermediate transactions in an economy, and designate the supply and use of the products within the economy (McLennan, 2006). They generally provide a detailed industry-by-industry breakdown of the projected effects of demand changes and are widely used to present the technical relationship between output by product or activity and intermediate consumption (Giaoutzi & Nijkamp, 2006; United Nations, 2010b). Input-Output models presume free flow of resources, such as labour, capital and land, to the tourism industries as well as to other industries. It is, however, assumed that these resources are not used elsewhere, which limits the model in the case of tourism (Dwyer, Forsyth, & Spurr, 2004).

The use of I-O tables is particularly complex in the tourism industry due to the fact that many elements of tourism consumption belong to intermediate consumption of activities developed by resident producers. It therefore requires the use of a developed system of National

Accounts as well as the TSA. The supply and use tables should represent the imported components of each cell, representing inputs of all industries as well as of internal tourism consumption (United Nations, 2010b). The most recent supply and use table for Iceland is from the year 2003. Input-Output tables have not been produced on the regional level in Iceland and are not used as such in this study (Statistics Iceland, 2015b).

Computable general equilibrium models

The computable general equilibrium (CGE) models are descended from the input-output models with the aim of relaxing some of the constraints such as the price variation in the I-O tables. The supply and use table represents a situation of equilibrium between the diverse variables of the system in this model. It is used to estimate how the economy reacts to changes of variables generated by tourism. A new equilibrium situation is calculated under the conditions imposed by the vector of tourism demand and the relationships between the variables of the supply and use table. Unlike input-output models, the CGE models vary in data, assumptions and structure and are less fit for international comparison (Burnett, Cutler, & Thresher, 2007; Dwyer, Forsyth, & Spurr, 2004; United Nations, 2010b). No tourism related economic studies in Iceland using this method were found.

Multipliers

Multipliers are a useful tool to estimate the re-circulation of spending within a region. They are often based on input-output models and the most commonly used types of multipliers are those which estimate the effects on output of the sectors, household income and employment generation. Multipliers differ across the various sectors of the economy, where the combination of labour and other inputs affect the size of the multiplier as well as the tendency of each sector to buy goods and services from producers within the economy (Giaoutzi & Nijkamp, 2006). A special method, called Regional Industrial Multiplier System (RIMS), has been developed to estimate regional input-output multipliers (Daley, 1997; Frechtling & Horváth, 1999). Input-Output tables are generally broken down to industry sectors (in Iceland this would be according to the ISAT2008 classification). In the tourism industry, an output multiplier is defined as the total value of production in all sectors of the economy that is necessary to satisfy each krona's worth of final demand for tourism goods or services (Miller & Blair, 2009).

The Keynesian multiplier is often used in tourism studies as it assesses the leakages and linkages effects, where the multiplier represents the amount of income generated per unit of tourist expenditure. The Keynesian multiplier is divided into direct and indirect components (Lejárraga & Walkenhorst, 2010).

Multipliers have been used in several economic studies in Iceland. However, no examples were found on regional I-O multipliers as no I-O tables have been produced on the regional level in the country. In a study from 2004 on the economic effects of lower airport charges at the Keflavík International Airport (KEF), the Institute of Economic Studies used output multipliers to estimate the effects based on tourism expenditure in Iceland. The multipliers were used to calculate the expenditures by categories as presented in the Icelandic Tourist Board visitor survey. The multiplier for the category of Commerce, hotels and restaurants was 1,70 for direct and indirect effects and 4,20 when induced effects were included. This means that every Icelandic krona spent in the above sector, recirculates 4,2 times within the local economy before leaving through the purchase of an import when indirect and induced effects are taken into calculation (Institute of Economic Studies, 2004).

Other multipliers used in Icelandic studies are for instance multipliers on employment. In a study on the economic effects of the Alcoa aluminium plant in Reyðarfjörður in 2005, the Institute of Economic Studies calculated both output and employment multipliers derived from a 1997 I-O table. For the output multiplier, the institute calculated a multiplier in the hotel and restaurant sector of 2,48 when induced and indirect effects were both taken into consideration. The employment multiplier for the same category was 1,88, meaning that every job change in the hotel and restaurant industry effects 1,88 other jobs in the economy.

Input-Output multipliers are particularly suitable for the evaluation of regional services industries such as tourism as they measure how much of direct spending is recirculated within the regional economy, allowing an evaluation of the total economic impact of tourism in the region (D'Hernoncourt, Cordier, & Hadley, 2011).

The size of the multiplier depends on the scope and diversity of the region's economy. A large and diverse economy is more likely than a small and a homogenous economy to retain revenues generated locally within the region. Small regions generally do not have the structural capacity to recycle revenues through the economy and must import a large share of goods and inputs to the region. This increases the leakages from the local economy, resulting in a lower multiplier (Saarinen, 2003; Watson, Wilson, Thilmany, & Winter, 2007).

As output multipliers are derived from I-O tables this application has not been possible on the regional level in Iceland, due to the absence of these tables on the subnational level in the country. Output multipliers are therefore only relevant in the case of the entire national economy in Iceland and should not be used for regional estimations as the economic conditions differ from one region to another and the national multipliers do not reflect the industries' intermediate transactions within specific regions.

In this study, an approach was made to estimate the *partial indirect effects*, or the first *round effects* which arise when the initial demand generates a need for inputs from the productive sectors. Due to time and financial constraints it was not possible to measure these effects further and study the need that these outputs generate for additional inputs, second round effects and so forth until it leaks out in the form of imports. In the first round, the demand for the extra ISK's worth of tourism output is considered as having caused the production of these outputs and the tourism industry is said to have *backwards linkages* to the industries supplying its inputs (McLennan, 2006). Companies were asked for detailed information on operating expenses, including the share of inputs originated from the research area.

Total operating expenses when salary cost and depreciation were excluded resulted in 2.495 m. ISK, whereof 36,2% originated in Þingeyjarsýslur and 58,7% in Northeast Iceland (table 16). First round effects of tourism in Þingeyjarsýslur can therefore be considered 0,19 when induced effects and later rounds of indirect effects are excluded. These indirect effects are partial and should be considered as such.

Linkages and leakages

The tourism demand for goods and services, described in the preceding section, can be met either within the local region or outside the region. This depends on the scope of linkages and leakages which designates the relationship between the tourism industry and the host economy (Lejárraga & Walkenhorst, 2010). Figure 35 demonstrates the effects of linkages and leakages in the tourism economy. There is a direct link between the size of the multiplier and the leakage in the economy. Regions with extensive and diversified economies generally have high multipliers and small leakage as households and business find most of the service needed within the region. The geographic size of the region also affects the multiplier as high transport costs inhibit import (Giaoutzi & Nijkamp, 2006; Saarinen, 2003). Furthermore, regions that serve as centres for the surrounding areas tend to have higher multipliers and smaller leakage than more isolated areas (Giaoutzi & Nijkamp, 2006).

Tourism linkages with other sectors of the economy are important when developing a profitable and well-functioning regional tourism industry. In Þingeyjarsýslur, the supply of goods and services for the tourism industry are reasonably good compared to the size of the economy. Local greenhouse vegetable production, meat and fish production, various local farm production, bakery and specified production of traditional bread, grocery stores, as well as diverse technical services in the construction industry can be found in the region. However, there is little supply of appliances needed for the rapid growth of the tourism industry, such as furniture, fixtures and equipment in the accommodation and F&B sector as well as other specified equipment in the recreational industry. It can also be time consuming for a tourism enterprise to procure supplies from all the various local food suppliers in the area in comparison to the larger specialised wholesalers (outside the region), offering all in one for the F&B industry.

However, it was obvious from the interviews that a vast majority of respondents emphasised doing business with local companies whenever possible, not only to support the regional economy, but also to enable the promotion of their goods as local production. This calls for good organisation and high quality services within the region, which most often was the case. However, some companies claimed that they would have liked to experience more initiative from the servicing companies, e.g. in the form of promotion and presentation of their services, as they generally received from the larger suppliers outside the region.

The total operating cost of companies directly involved in tourism in Þingeyjarsýslur was 4.819 m. ISK, whereof tourism related operation cost was 2.495 m. ISK in year 2013. This includes all expenses directly related to tourism except salary cost and depreciation. During the interviews, companies were asked to estimate the share of the expenses that were derived from within Þingeyjarsýslur and the North East Iceland specifically. The share of the expenses derived from the region represents the linkages within the regional economy and the remaining share represents the leakages from the region. Table 16 demonstrates the results by tourism categories. The highest linkages ratio in Þingeyjarsýslur was within the travel agencies and other reservation sector whereas the highest leakages ratio was within the sector of goods purchased from trade activities.

Table 16. Total tourism operating cost spent within regions of study ('000 ISK)*Source:* The author's elaboration based on interview data.

	Þingeyjarsýslur			North East		
	Total	Linkages	Leakages	Total	Linkages	Leakages
Accommodation services	267.130	35,6%	64,4%	529.604	70,6%	29,4%
F&B serving services	70.001	40,9%	59,1%	91.912	53,7%	46,3%
Travel agencies & other reservation services	243.034	54,9%	45,1%	296.329	66,9%	33,1%
Cultural services & Sport and recreational services & Transportation	85.308	32,2%	67,8%	123.973	46,7%	53,3%
Goods purchased from trade activities	90.715	18,0%	82,0%	198.017	39,4%	60,6%
Other services	147.754	40,8%	59,2%	225.707	62,3%	37,7%
Total	903.943	36,2%	63,8%	1.465.543	58,7%	41,3%

Tourism literature on linkages and leakages often suggests that countries should keep their focus on minimizing leakages and maximizing linkages in the economy of reference. Lejárraga and Walkenhorst (2010), however, warn that this could include deprivation of the gains from free trade and specialisation and that countries should rather aim for the prosperous balance of both linkages and leakages. This applies also for the regional level.

The results presented in table 16 should not be compared to international studies on linkages or leakages as this approach is based on limited data and shows only the first round multiplier effects whereas most international studies present more rounds based on more data availability. Difficulties in measuring the indirect effects of tourism in the Nordic peripheries are known. According to Saarinen (2003) the indirect effects are frequently ignored in the Nordic Model due to their low level which is common in the Nordic peripheries.

Induced effects

With the rise in tourism demand, an increase occurs in tourism salary payments, which then generates additional demand for goods and services through a rise in the household consumption by tourism employees. This causes a chain of induced effects on goods and services in the economy (United Nations, 2010b). Induced effects in tourism are generally larger than the indirect effects as tourism tends to be labour intensive (Giaoutzi & Nijkamp, 2006).

A special survey was conducted in this study on the regional expenditure of tourism employees in Þingeyjarsýslur (Appendix 4). No information was available on tourism employees in the region so the only way to approach them was through the company representatives. Each of the 126 companies in this study received an e-mail with information on the research and a request to send the survey to all the employees with registered e-mail accounts at the company (either company or private account). The questions in the survey were designed to reflect similar questions in the Statistics Iceland household expenditure survey. Despite several reminders and the positive reaction of company representatives, the total number of responses was only 44. This did not reach the minimum level for statistical analysis and therefore induced effects had to be excluded from the calculations of this study.

5.2 MUNICIPAL REVENUES

The increase in tourism in Þingeyjarsýslur has generated increased use of public facilities and services such as information centres, swimming pools, museums, public restroom facilities, waste collection and health care services. At the same time, physical infrastructure, such as roads, walking paths, water supply, sewage, signage, parking places and other public utilities such as wifi, is being better utilized. Much of these facilities are under the auspices of local municipalities causing increased expenses with this rise in usage. It has been argued that the municipal revenues from tourism cannot cover the increase in expenses and a discussion on changes in the municipal share of the national tax system has taken place (Einarsson, 2015; Sustainable tourism online, n.d.). The municipal revenue sources in tourism in the Þingeyjarsýslur region are mainly the following (table 17):

Table 17. Municipal revenue sources with relevance for tourism in the Þingeyjarsýslur region

Taxes	Dues	Other revenues
Municipal income tax	Harbour dues	Community centres
Property tax	Water dues	Schools (summer rentals)
	Sewage dues	Culture centres
	Garbage dues	Sport centres & clubs
	Passenger charge	Swimming pools
		Camping places
		Theatres & clubs
		Information centres

Table 17 demonstrates the main tourism related municipal revenue sources. The categorisation in the table is different from the conventional classification in municipal accounts in Iceland of the three revenue sources; revenues from taxes, from intergovernmental transfers and from other sources (Association of Local Authorities in Iceland, n.d.a.). Taxes and intergovernmental transfers generally generate revenues without demanding expenses or services, but the other revenue sources rarely generate revenues which cover the service expenses.

5.2.1 Revenue basis

The municipal revenue base in Iceland is tripartite, consisting of the municipal income tax, property tax and contributions from the Equalisation Fund. Other revenues come from miscellaneous service fees and dues. The municipal income tax is generally the largest source of revenue and its collection takes place at source each month during the income year. Every person who is obliged to pay municipal income tax shall pay the tax to the municipality where he or she has legal residence. If a person has legal residence in more than one municipality during the tax year, that person has to pay municipal tax to the appropriate municipality in accordance with the time of residence in each municipality (Alþingi, 1995; KPMG, 2013; Sverrisson & Hannesson, n.d.). It has proved difficult to estimate regionally the tourism related revenues from the municipal income tax due to the seasonality of the industry as well as the employees' mobility. Temporary employment within the tourism industry is common and students seeking summer jobs present a large share of the total employment in the industry. Foreign employees are generally registered with legal domicile at the place of work, but in the case of temporary Icelandic employees, the registration of legal domicile is deficient at times.

5.2.2 Municipal income tax

The municipal income tax in Þingeyjarsýslur ranged from 14,05% to 14,48% of total salaries in 2013 in the six municipalities²⁸ (Association of Local Authorities in Iceland, 2013). When calculating the share of tourism revenues in this category, one must pay attention to the tourism ratio in each tourism category. The levied municipal income tax in Þingeyjarsýslur in 2014 (salary year 2013) was 2.086 m. ISK. The share of the Equalisation Fund was 248

²⁸ Tjörneshreppur: 14,05%, Other municipalities in the region: 14,48%.

million ISK. The levied net tax was therefore 1.838 m. ISK (Association of Local Authorities in Iceland, 2014).

According to the results of this study, the total salary cost in the tourism related companies in Þingeyjarsýslur was 1.971 m. ISK, whereof salaries from tourism activities exclusively were 1.436 m. ISK. The estimated municipal tax accounted for 176 m. ISK, or 155 m. ISK net municipal income tax when the share of the Equalisation fund has been subtracted. This figure represents 8,45% of the total levied municipal income tax in the region.

However, the net municipal income does not go directly to the municipality where the tourism activity takes place, as it depends on the legal residence of the employee and not the employer. In the case of Þingeyjarsýslur, 82% of the annual work units had their legal residence within Þingeyjarsýslur. This lowers the value of the revenues from the municipal income tax to 145 m. ISK²⁹. According to this, 6,9% of the total municipal income tax in Þingeyjarsýslur was derived from tourism in 2013. At the same time, the share of the total AWU in tourism of the total AWU in all industries in the region is 14,8% (Northeast Iceland Development Agency, 2015).

Table 18. Estimated municipal income tax revenues from tourism in Þingeyjarsýslur 2013 (m. ISK)

Source: Association of Local Authorities in Iceland (2014) and the author's elaboration on interview data.

Total wages and related expenses in the tourism industry	1.436
Tax base in the tourism industry	1.217
Total municipal income tax	2.086
Total tourism related municipal income tax	176
Total tourism related municipal income tax according to domicile registration	145

According to the estimations in table 18, municipal revenues totalling 31 m. ISK leaked from the region in 2013 due to deficiencies in tourism employees domicile registration. This refers solely to the income from tourism operation within Þingeyjarsýslur.

²⁹ Including the share of the Equalisation fund.

5.2.3 Property tax

Property taxes are obligatory in Iceland. Municipalities levy the tax on the official premises valuation of real estate annually. The tax rate varies depending on the municipality and the type of real estate (Alþingi, 1995; KPMG, 2013). Tourism related property tax is derived from real estates in the industry such as in the accommodation sector and the food and beverage service sector, as well as in other categories. When estimating tourism related revenues from this tax source, the tourism ratio of each category has to be calculated as in all other tourism related calculations. The property types are categorised into three parts, A, B and C where A constitutes residential buildings, B is for public buildings and C is for commercial premises. When computing tourism related revenues, the main focus is on category B and C. The property tax rates in Þingeyjarsýslur in 2013 ranged from 0,45% to 0,63% in category A, it was 1,32% in category B and ranged from 1,5% to 1,65% in category C between the municipalities in the region (Association of Local Authorities in Iceland, n.d.c.). Only two municipalities out of six responded to queries on tourism related revenues from property tax, resulting in inadequate information to draw conclusions from.

5.2.4 Dues

Other municipal income derives from various smaller income bases like service fees, e.g. license fees, sewage disposal fees, lot rental, passenger charge etc. Furthermore, municipalities run various activities in independent operational units or companies, such as heating and water utilities, harbours and social apartments which have independent revenues (Alþingi, 1995).

Passenger charge is levied on passenger ships in Norðurþing. In 2013, revenues from cruise ships were 7,1 m. ISK and revenues from whale watching boats 5,6 m. ISK (Norðurþing Harbour Fund, 2014).

5.2.5 Other revenues

Other sources of income are some municipality run tourism characteristic entities such as campsites and information centres (table 17). These entities gain revenues directly from tourism. Municipalities gain rental revenues in some cases, such as when boarding schools and community centres are rented as summer hotels and restaurants.

An unsuccessful attempt was made to get information on the abovementioned revenue sources within the six municipalities in the study. Two municipalities out of six responded to queries, resulting in inadequate information to draw conclusions from.

6 CONCLUSIONS

This study set out to explore the availability of regional statistical data in the tourism industry in Iceland and to analyse the economic effects of tourism regionally. This was done by gathering regional data from *in situ* research consisting of 102 company interviews and 920 visitor survey responses. The data was compiled in Þingeyjarsýslur during the period of 2013-2015.

The method used in this study was retrieved as much as possible from the principles of the *Tourism Satellite Account: Recommended Methodological Framework 2008* (United Nations, 2010b). This method is designed for the national level and therefore it inevitably includes limitations when applied on the regional level. In the instances where this method was not applicable, special consideration was paid to the *Nordic Model*, which has been used for the evaluation of economic impacts of tourism in Nordic peripheries (Saarinen, 2003).

At the first stages of this research, much effort was put into the search for regional enterprise data in public databases. It turned out that the only acceptable enterprise data for the region had to be gathered first hand, which resulted in the above mentioned interviews and visitor survey. The participation in the company interviews was good and resulted in a 81% response rate.

The main results from the study are the following:

In 2013, the total visitor number in Þingeyjarsýslur was estimated to be 312.000. Thereof 205.000 were inbound visitors and 107.000 were domestic visitors. In 2014 these numbers increased to 269.000 inbound visitors and 112.000 domestic visitors. Approximately 77% of the inbound visitors in 2013 came to the region during the period of June-August. During the summer months, 64% of the visitors spent the night in the region whereas 43% of the visitors spent the night in the region during the wintertime (Guðmundsson, 2015).

The total number of overnight stays in Þingeyjarsýslur in all types of accommodation and by all tourists in 2013 was 206.808, whereof 58% stayed at hotels and guesthouses. Thereof 79% of the total nights in the region were spent by inbound tourists. The overnight stays in Þingeyjarsýslur represented 4,5% of the total overnight stays in Iceland in 2013 (Statistics Iceland, n.d.a; 2014a; 2015a).

The total turnover from industries directly involved in tourism in Þingeyjarsýslur in 2013 was 8.335 m. ISK. The estimated tourism turnover thereof was 4.672 m. ISK, where

accommodation services presented the largest share (33%). The share of the tourism accommodation turnover in Þingeyjarsýslur of the total tourism accommodation turnover in Iceland was 4,0% in 2013.

The total number of Annual Working Units in the tourism industry was estimated to be 313 in year 2013. Full time equivalents during the summer months accounted for 749 whereas the same number during the wintertime was 151.

The abovementioned results present the direct impacts of tourism in the region. This study also had the purpose of measuring the indirect and induced effects of tourism in Þingeyjarsýslur. It emerged from the study that international methods based on Input-Output models, Computable general equilibrium models and multiplier calculations were not applicable in this region due to lack of data. The only possible way of estimating the indirect effects was through primary data collected from the company interviews.

The indirect effects measured in this study are therefore partial and should be considered as such. They only present the first round effect of tourism in Þingeyjarsýslur based on purchases and other operating expenses of tourism companies in the region. According to these results, the total tourism operating expenses when salary costs and depreciation were excluded were 2.495 m. ISK, whereof 36,2% originated in Þingeyjarsýslur and 58,7% in NE Iceland. First round effects of tourism in Þingeyjarsýslur can therefore be considered 0,19 when induced effects and later rounds of indirect effects are excluded.

An attempt was made to measure the induced effects based on expenditure survey sent to the tourism companies in the region, intended for the tourism employees. Due to difficulties in reaching the employees, as well as a low response rate to the survey, these attempts yielded no success and calculations on the induced effects of tourism were excluded from the study.

The total salary cost in companies directly involved in tourism in Þingeyjarsýslur was estimated to be 1.971 m. ISK, whereof salaries from tourism activities exclusively were 1.436 m. ISK. The estimated municipal tax accounted for 176 m. ISK, representing 8,45% of the total levied municipal income tax in the region. When adjustments have been made for the employees domicile registration, this amount decreases to 145 m. ISK, or 6,9% of total municipal income tax in the region. The average monthly salary in the tourism industry in 2013 was estimated to be 324 thousand ISK.

This study has developed an approach to evaluating the regional economic effects of tourism in Iceland. This work is based on extensive primary data gathering due to the serious lack of

tourism data on the regional level in Iceland. It is the author's opinion that this research environment is unacceptable for further regional studies. Public effort must be put into this sector in order to improve the data availability in the tourism industry. Rural areas differ in nature from the urban areas at the same time as they differ from one another and national data cannot be applied for specific regions. The need for area specific data is essential to provide a base for future analysis and industry planning. This is very urgent in the ever-growing tourism industry in Iceland. Borderlines must be drawn for tourism regions and destinations and area specific planning and implementation for these areas needs to be based on reliable data and analysis in order to secure the best use of resources in the future.

7 LIMITATIONS

In this study, an attempt was made to evaluate the regional economic impact of tourism in the Þingeyjarsýslur region in Iceland based to the greatest extent possible on the TSA:2008 principles. Due to lack of regional data, adjustments were inevitable to the methodology.

Total output could not be retrieved due to lack of data and despite conceptual differences between turnover and production concepts, the total turnover of companies directly involved in tourism was used as a proxy to represent the regional production accounts of tourism industries (at basic prices). This is done in accordance with the Nordic Model.

The company population in the study consisted solely of companies directly involved in tourism, and not the entire list of companies within each ISAT 2008 categorisation of tourism industries as recommended in the TSA methodology. This is due to time and financial constraints as information on all companies in the region needed to be collected by interviews as necessary regional enterprise data was not retrievable in public data sources. This affects the total turnover in the industry, but should not affect the tourism turnover.

TSGVA and TDGDP were not calculated on the regional level due to lack of data. Information from the interviews on investments and financing did not suffice as a foundation for any conclusions and was therefore excluded from the calculations.

Results from visitor surveys are exclusively for the Lake Mývatn region and Húsavík. Numbers from other places in the region are therefore not included. The visitor surveys were based on convenience sampling from one spot at each place, which includes inevitable sampling biases. This is due to the fact that no information was retrievable on the location and number of tourists at each time and place which deters the possibility of spreading the survey proportionally around the area. The areas chosen were outside the Húsavík Information Centre and the Lake Mývatn Information Centre. This inevitably excludes tourists such as those on horse trekking and sport fishing tours from the sample.

Direct municipal revenues from tourism establishments owned by the municipalities are not included in the calculations due to a lack of response from the municipalities.

Indirect effects calculations from the study are partial and need to be considered as such.

Induced effects were not calculated due to the low response rate of the expenditure survey.

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9 APPENDICES

APPENDIX 1

Visitor survey 2013

16. Is there anything at last you would like to add? Some activity, attraction, entertainment etc. you would like to see in Húsavík?

English



Visitor survey in Húsavík summer of 2013

This survey is a part of a study conducted by Húsavík Academic Center in the summer of 2013. The aim of the research is to measure the tourism expenditure pattern in Húsavík. We would be grateful if you could spare few minutes to respond to this survey. Answers will be treated anonymously.

1. Gender Female Male 2. Year of birth _____

3. Country of residence? _____

4. What is your level of education?

Primary school Secondary school
 Vocational education University degree

5. What is your income compared to an average income in your home country?

Below average Above average
 Average High

6. Your travel companion(s)?

None Co-workers
 Family/friends Others, who?
 Organized tour group _____

7. Did you stay in Húsavík last night or will you stay tonight?

Yes No (If no, please go to question 9)

8. What sort of accommodation did you/will you use in Húsavík?

Camping site Guesthouse Summer house/Cottages
 Farm Holidays Hotel Annað _____
 Family/friends

9. What is the main purpose of your visit to Húsavík?

Holiday Visiting relatives/friends
 Business trip/Conference Event/festival
 Other, what? _____

10. How did you travel to Húsavík?

Bus (Scheduled service) Flight
 Your own car Tour bus
 Rental car Cruise sail
 Friend's car Other, what? _____

11. How long do you expect your total stay in Húsavík to be?

0 – 3 hours 25 – 48 hours
 4 – 6 hours 3 – 4 days
 7 – 12 hours 5 – 6 days
 13 – 24 hours More _____ days

12. How long do you plan to stay in Iceland?

_____ nights

13. Mark all aspects/activities you plan to experience during your stay in Húsavík

Bird watching Golf Hiking Horse trips
 Whale watching Museum Night life Fishing
 Other, what? _____

In questions 14 and 15 we seek information on how much an average person spends in 24 hours (one day) here in Húsavík and what they spend it on.

- Please specify all your spending (or that of your group) in Húsavík last 24 hours. Please specify as well if you have prepaid any services or will pay later for services or goods consumed with in a period of 24 hours (or total spending during your stay if it has been shorter than 24 hours).
- If you are in a group (e.g. family) where one person pays all expenditure for the group, please specify the total spending of the group and mark the number of persons in question 14.
- If you pay your own share of joint spending, please specify only your own spending and mark „1“ in question 14.

14. How many people does this expenditure cover?

_____ people

15. How much money did you spend in total on the following things for the last 24 hours? (please specify the amount below and tick the currency used in the box on the right, estimates are appreciated).

Accommodation _____	Currency: <input type="checkbox"/> ISK <input type="checkbox"/> EUR <input type="checkbox"/> GBP <input type="checkbox"/> DKK <input type="checkbox"/> USD <input type="checkbox"/> Other
Gas/oil _____	
Restaurants/hotels/cafés _____	
Groceries (e.g. food, beverages in supermarkets) _____	
Recreation (e.g. admission fees, museums, tours) _____	
Shopping (e.g. clothing, goods) _____	
Souvenirs _____	
Other _____	

16. Is there anything at last you would like to add? Some activity, attraction, entertainment etc. you would like to see in Mývatn ?

Blank lines for additional information.

Visitor survey in Mývatn, summer 2013

This survey is a part of a study conducted by Húsavík Academic Center in the summer of 2013. The aim of the research is to measure the tourism expenditure pattern in Mývatn and surroundings as well as to gather information about our visitors in order to improve the tourist services in the area. We would be grateful if you could spare few minutes to respond to this survey. Answers will be treated anonymously.

1. Gender [] Female [] Male 2. Year of birth _____

3. Country of residence? _____

4. What is your level of education? [] Primary school [] Secondary school [] Vocational education [] University degree

5. What is your income compared to an average income in your home country? [] Below average [] Above average [] Average [] High

6. Your travel companion(s)? [] None [] Co-workers [] Family/friends [] Others, who? [] Organized tour group

7. Did you stay in Mývatn last night or will you stay tonight? [] Yes [] No (If no, please go to question 9)

8. What sort of accommodation did you/will you use in Mývatn ?

- [] Camping site [] Guesthouse [] Summer house/Cottages [] Farm Holidays [] Hotel [] Family/friends [] Other _____

9. What is the main purpose of your visit to Mývatn ?

- [] Holiday [] Visiting relatives/friends [] Business trip/Conference [] Event/festival [] Other, what? _____

10. How did you travel to Mývatn ?

- [] Bus (Scheduled service) [] Flight [] Your own car [] Tour bus [] Rental car [] Cruise sail [] Friend's car [] Other, what? _____

11. How long do you expect your total stay in Mývatn to be ?

- [] 0 - 3 hours [] 25 - 48 hours [] 4 - 6 hours [] 3 - 4 days [] 7 - 12 hours [] 5 - 6 days [] 13 - 24 hours [] More _____ days

12. How long do you plan to stay in Iceland?

_____ nights

13. Mark all aspects/activities you plan to experience during your stay in Mývatn

- [] Bird watching [] Swimming hall [] Sightseeing tour [] Hiking [] Nature Bath [] Horse trip [] Cave exploration [] Museum [] Bicycle rental [] Highland tour [] Fishing [] Golf [] Local food tasting [] Other? _____

In questions 14 and 15 we seek information on the total tourist expenditure in Mývatn for the last 24 hours (one day) and what it is spent on.

- Please specify all your expenditure (or that of your group) in Mývatn last 24 hours. Please specify as well if you have prepaid any services or will pay later for services or goods consumed within a period of 24 hours (or total expenditure during your stay if it has been shorter than 24 hours). [] If you are in a group (e.g. family) where one person pays all expenditure for the group, please specify the total spending of the group and mark the number of persons in question 14. [] If you pay your own share of joint spending, please specify only your own spending and mark „1“ in question 14.

14. How many people does this expenditure cover?

_____ people

15. How much money did you spend in total on the following things for the last 24 hours? (Please specify the amount below and tick the currency used in the box on the right, estimates are appreciated).

- Accommodation _____ Gas/oil _____ Restaurants/hotels/cafés _____ Groceries (e.g. food, beverages in supermarkets) _____ Recreation (e.g. admission fees, museums, tours) _____ Shopping (e.g. clothing, goods) _____ Souvenirs _____ Other _____

- Currency: [] ISK [] EUR [] GBP [] DKK [] USD [] Other _____

APPENDIX 2

Table 19. Classification of products and the related industries from the new Icelandic TSA.

Source: Frenç, 2015a.

No.	UNWTO categories	Icelandic categories	
		ISAT codes	Name
A.1. Tourism characteristic products/industries (for international comparability)			
1.	Accommodation services	55.10.1	Hotels and similar accommodation, without restaurants
		55.10.2	Hotels and similar accommodation, with restaurants
		55.20.0	Holiday and other short-stay accommodation
		55.30.0	Camping grounds, recreational vehicle parks and trailer parks
		55.90.0	Other accommodation
2.	Food- and beverage-serving services	56.10.0	Restaurants and mobile food service activities
		56.29.0	Other food service activities
		56.30.0	Beverage serving activities
3.	Road passenger transportation	49.32.0	Taxi operation
		49.39.0	Other passenger land transport not elsewhere classified (n.e.c.)
4.	Water passenger transportation	50.10.0	Sea and coastal passenger water transport
		50.30.0	Inland passenger water transport
5.	Air passenger transportation	51.10.1	Scheduled air transport
		51.10.2	Non-scheduled air transport
6.	Transport equipment rental	77.11.0	Renting and leasing of cars and light motor vehicles
		77.12.0	Renting and leasing of trucks
7.	Travel agencies and other reservation services	79.11.0	Travel agency activities
		79.12.0	Tour operator activities
		79.90.0	Other reservation service and related activities

8.	Cultural services	90.01.0	Performing arts
		90.02.0	Support activities to performing arts
		90.03.0	Artistic creation
		90.04.0	Operation of arts facilities
		91.02.0	Museums activities
		91.03.0	Operation of historical sites and buildings and similar visitor attractions
		91.04.0	Botanical and zoological gardens and nature reserves activities
9.	Sports and recreational services	77.21.0	Renting and leasing of recreational and sports goods
		92.00.0	Gambling and betting activities
		93.11.0	Operation of sports facilities
		93.13.0	Fitness facilities
		93.19.0	Other sports activities
		93.21.0	Activities of amusement parks and theme parks
		93.29.0	Other amusement and recreation activities
A.2. Other consumption products			
10.	Goods purchased from trade activities	46.00	Wholesale trade
		47.00	Retail sale
11.	Other services		All the rest of industries providing services to tourists

APPENDIX 3

Companies' questionnaire



Economic effects of tourism in Þingeyjarsýslur Numbers from financial statement 2013

Company name: _____

Operating revenues	Goods	Services	Total
Total			
Ratio from tourism			

Operating expenses without salaries and amortization	Total
Total	
Ratio within Þingeyjarsýsla	
Ratio within North-East Iceland (Þingeyjars. + Eyjafj.sýsla)	

Suppliers / Service companies	
Name your 5 largest suppliers of goods and services in Þingeyjarsýslur ranked by scope of business	
1	
2	
3	
4	
5	
What is the estimated ratio of the 5 largest suppliers of total operating expenses	%

Investment	material	services	Total
Total			
Ratio within Þingeyjarsýsla			
Ratio within North-East Iceland (Þingeyjars. + Eyjafj.sýsla)			

Employment cost	salaries and rel. exp.	no of employees	no of full time equivalents
Within Þingeyjarsýsla			
Outside of Þingeyjarsýsla			
Total			

Full-time equivalents (number)	FTE summer (jun-aug)	FTE winter (sep-may)
Within Þingeyjarsýsla		
Outside of Þingeyjarsýsla		
Total		

Fees and taxes	
Income tax	
VAT	
property tax	
other fees and taxes	

Competition	
From which industries do tourism employees most often come (name 1-3 by importance)?	
1	
2	
3	
What is the main reason for tourism employees to leave their former jobs ? (evaluate)	

APPENDIX 4

Questionnaire for tourism employees



Könnun meðal starfsmanna ferðaþjónustufyrirtækja í Þingeyjarsýslu 2013

Ágæti viðtakandi.

Þessi stutta könnun er hluti af stærra verkefni sem unnið er á vegum Rannsóknaseturs Háskóla Íslands, Rannsóknamiðstöðvar ferðamála og Þekkingarnets Þingeyinga um efnahagsleg áhrif ferðaþjónustu í Þingeyjarsýslu. Þessi könnun snýr að neyslu starfsmanna ferðaþjónustufyrirtækja í Þingeyjarsýslu og samanstendur af fjórum spurningum sem ætlað er að auðvelda mat á margfeldisáhrifum ferðaþjónustu á svæðinu.

Þátttaka ykkar er rannsókninni mjög mikilvæg og svörin eru ekki rekjanleg. Við biðjum ykkur vinsamlegast að áætla meðalútgjöld á mánuði og hversu miklu af þeim útgjöldum er eytt innan Þingeyjarsýslu.

Vakni spurningar við framkvæmd könnunarinnar er ykkur velkomið að hafa samband við Rannsóknasetur Háskóla Íslands á Húsavík í síma [464-5121](tel:464-5121) eða beint til mín í síma [698-3449](tel:698-3449).

Kærar þakkir fyrir þitt framlag.

Lilja Rögnvaldsdóttir

1. Hvernig var/er starfshlutfalli þínu háttáð hjá ferðaþjónustufyrirtækjum í Þingeyjarsýslu árið 2013? (Ef um er að ræða fullt starf allt árið verður að merkja við 81%-100% fyrir hvern mánuð. Hjá sumarstarfsmönnum þarf að merkja við 0-20% þá mánuði sem þeir voru ekki við störf).

	0%-20%	21%-40%	41%-60%	61%-80%	81%-100%
janúar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
febrúar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
apríl	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
maí	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
júní	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
júlí	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ágúst	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
september	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
október	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
nóvember	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
desember	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Hvar ert þú með skráð lögheimili ?

- Innan Þingeyjarsýslu
 Utan Þingeyjarsýslu

3. Vinsamlegast áætlið meðalútgjöld á mánuði eins og kostur er. Ef um sumarstarf er að ræða þarf að velja útgjaldamánuð á meðan starfsmaður er við störf í Þingeyjarsýslu. Gott er að áætla útgjöld út frá reikningsyfirliti í netbanka eða Meniga (heimilisbókhaldi í netbónkum). Heildarútgjöld geta átt við um einstakling eða fjölskyldu (sjá spurningu 4).

	Heildarútgjöld á mánuði	Hlutfall útgjalda í Þingeyjarsýslu
Matvöruverslanir	<input type="text"/>	<input type="text"/>
Áfengi og tóbak	<input type="text"/>	<input type="text"/>
Föt og skór	<input type="text"/>	<input type="text"/>
Húsnæði (húsaleiga, afborganir húsnæðisláns, tryggingar, hiti og rafmagn)	<input type="text"/>	<input type="text"/>
Húsgögn, heimilisbúnaður, gjafavörur ofl.	<input type="text"/>	<input type="text"/>
Hársnyrting og snyrtistofur	<input type="text"/>	<input type="text"/>
Heilsugæsla, tannlækningar og sjúkraþjálfun.	<input type="text"/>	<input type="text"/>
Ferðakostnaður (bensín, rektur bifreiðar, farmiðar, leigubílar ofl.)	<input type="text"/>	<input type="text"/>
Þjónusta iðnfyrirtækja (bifreiðaverkstæði, smiðir, rafvirkjar, pípuþvottþjónusta ofl.)	<input type="text"/>	<input type="text"/>
Tómstundir, íþróttir og menning (líkamsrækt, söfn, viðburðir, tómstundavörur, leikföng, blöð, bækur, tölvur, sjónvarp ofl.)	<input type="text"/>	<input type="text"/>
Menntun (námsbækur, skólagjöld ofl.)	<input type="text"/>	<input type="text"/>
Gisting (hótel, gistiheimili, tjaldsvæði ofl.)	<input type="text"/>	<input type="text"/>
Veitingastaðir og kaffihús	<input type="text"/>	<input type="text"/>
Aðrar vörur og þjónusta (fjármálaþjónusta, félagsleg þjónusta, símaþjónusta ofl.)	<input type="text"/>	<input type="text"/>

4. Vinsamlegast merkið við hversu marga ofangreind útgjöld ná yfir. Ath. merkið aðeins í einn reit.

	0 börn	1 barn	2 börn	3 börn	4 börn	5 börn eða fleiri
Einhleypir/ Einstæðir foreldrar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hjón/sambýlisfólk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Lokið



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