



Measuring the economic impact of tourism

How experiences from Denmark can be applied in an Icelandic context

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1. Wider economic effects

Additional analysis to take into account the indirect and induced effects of tourism

Deloitte has conducted an analysis of the state and municipal revenues and costs due to tourism. This analysis primarily focuses on the direct effect of tourism, i.e. increased revenue in hotels, restaurants and the transport sector, which in turn will lead to taxable profits and taxable personal incomes of the employees as well as VAT on the consumption.

However, there are wider economic effects of tourism in addition to the direct effects of tourism. These wider effects will also generate different types of taxable income/profits:

- The **indirect effects** are the economic activity that tourism spend generates in other companies that are suppliers to the tourism sector. For instance, food companies, companies in the craft sectors, suppliers of cars etc. The additional income and profits that are a result of the tourism spend in the first place will also generate taxes etc.
- The **induced effects** is the effect of the spend by employees in the tourism companies that are employed there because of the foreign tourism in Iceland. These employees will spend money which will generate income and profits that are taxable.

2. How to assess the economic effects

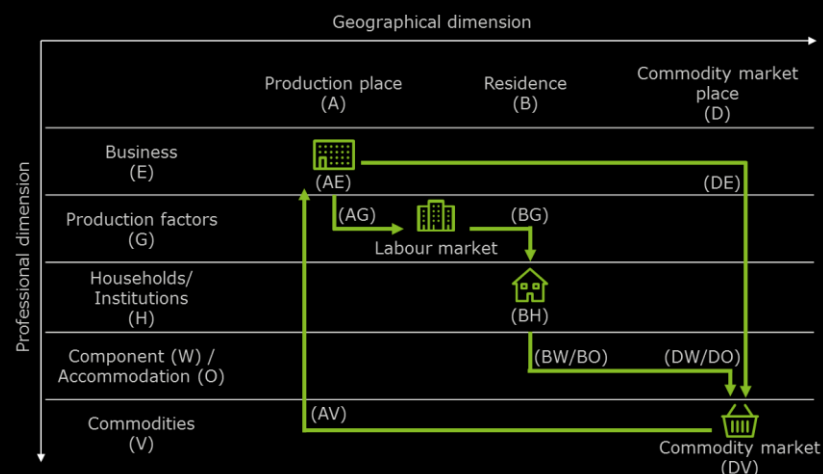
A model based approach to take into account the wider effects of tourism

In several countries, including Denmark and the UK, detailed economic models regarding tourism have been developed in order to take into account the local and regional effects in addition to the overall economic effects.

Model based analysis in Denmark of the **wider effects of tourism** indicate that the total derived effects (indirect and induced effects) can be **significant**.

The most popular model for estimating wider effects of tourism in Denmark is SAM-K/LINE.

1. The tourism is linked to the national accounts, based on the international guidelines for tourism satellite accounts (TSA), i.e. the OECD's and UNWTO's frameworks
2. A special tourism module in LINE allows one to assess the socioeconomic impacts of tourism







3. SAM-K/LINE

The Danish regional model

The model is used to monitor the development in population, employment and unemployment, incomes, consumption, etc. in the Danish regions, municipalities and parts of municipalities as well as Denmark as a whole.

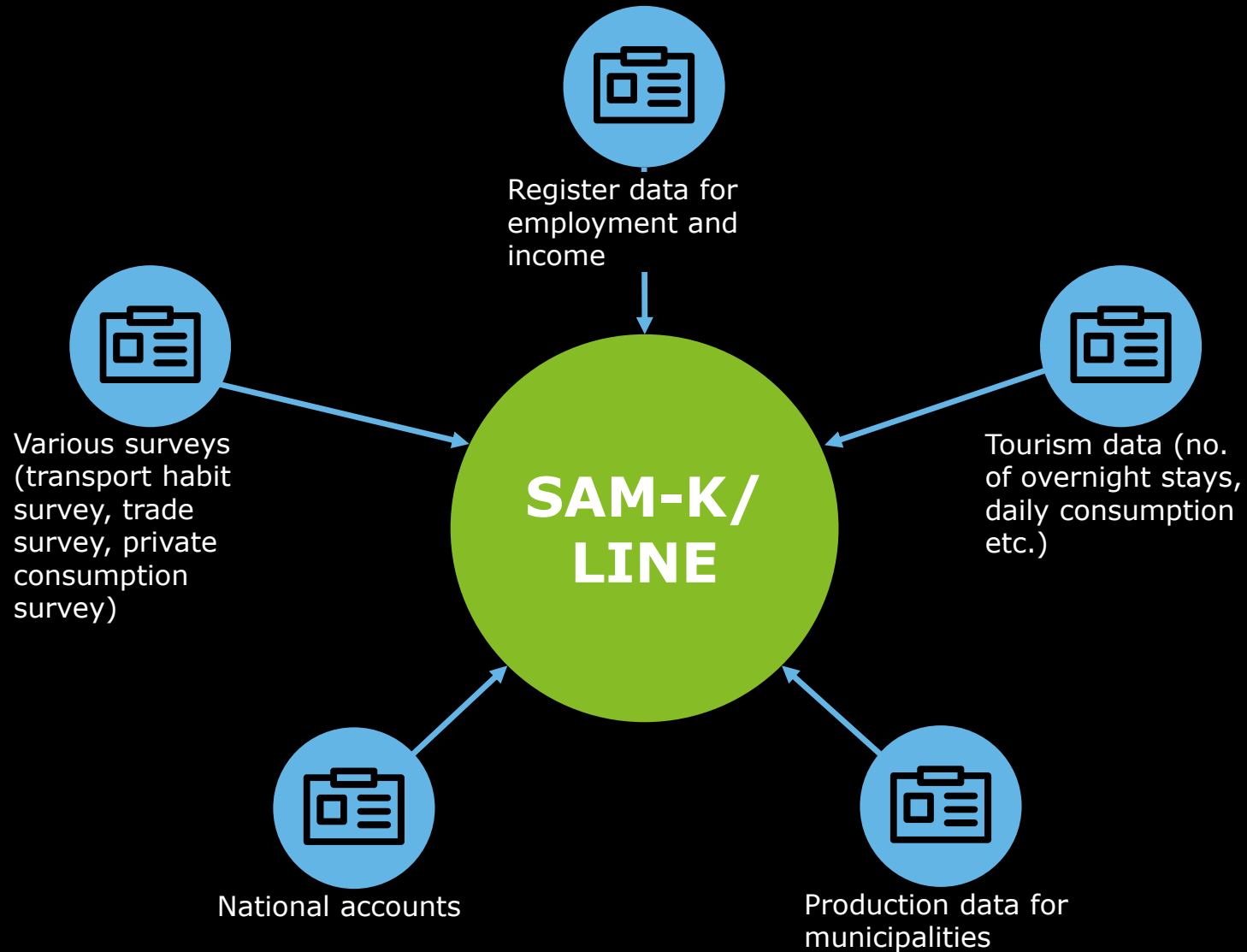
The model combines the local society account, SAM-K (**S**ocial **A**ccounting **M**atrices for municipalities) with the regional economic model (**L**ocal **I**Ntersectoral and interregional **E**conomic model).

Thus, it allows to estimate the discretionary effects of changed framework conditions and major business closures, for example:

-  What would the regional and local effects be if a large company such as LEGO closes or moves parts of its production abroad?
-  How would Lolland-Falster be affected by a drastic change in the sugar tax?
-  What is the effect of a fixed link across the Fehmarn Belt?
-  **How would a 10% increase in tourism affect Bornholm?**

3. SAM-K/LINE

A comprehensive data foundation



4. Experiences from Denmark

One million in tourism spend generates 1.2 jobs

Every year VisitDenmark and Center for Regional and Tourism Research analyses the economic impact of tourism in Denmark. Danish Regions and Statistics Denmark contribute as well.



5. Application in an Icelandic context

An approach that builds upon the direct effects of tourism already measured

1

The point of departure is the total revenue map from the initial analysis and the TSA for Iceland (updated)

- Direct effects of tourism from tourism spend in the primary tourism industries in terms of increased turnover and increased employment and taxes

2

Assessing the direct effects of tourism in related industries

- Input – output tables
- Input – output analysis. I.e. how will one million in tourism spend on hotels affect other industries?

3

Estimating the indirect and induced effects based on key figures of the relationships between production and employment, value added and tax

- Statistical analysis
- Using coefficients from models in Denmark or other countries

4

Evaluating the total economic impact of tourism in Iceland

- Direct effect *plus*
- Indirect effects (production in other industries, tax and value added) *plus*
- Induced effects (economic value from employment caused by foreign tourism)

Sensitivity analysis

Thank you for your attention

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