Estimating Nights Spent in Finnish Accommodation Establishments Based on Business Registers

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Abstract

According to the EU regulation on tourism statistics (EU 692/2011), member States accounting for less than 1 per cent of the total annual number of nights spent at tourist accommodation establishments in the European Union may further reduce the scope of observation, to include at least all tourist accommodation establishments having 20 or more bed places. When such a limitation to the scope is applied, an estimate of the total number of nights spent during the reference year by residents and non-residents in the tourist accommodation establishments excluded from the scope of observation shall be transmitted annually.

Finland is one of the member states that has provided an estimate of nights spent in below threshold establishments. The estimate is calculated based on registers of Statistic Finland. The estimate for 2012 is 2 million nights spent in 3,522 accommodation establishments. The data sources used include the register of (above threshold) accommodation establishments, the Business Register and tax data on agricultural enterprises.

This paper provides a description of the methodology used for identifying the below threshold establishments based on administrative data sources available to Statistics Finland including the calculation of the financial and non-financial indicators necessary for providing the estimate. Also a quality assessment of the estimate is provided including coverage, timeliness and comparability issues.

1. Introduction

According to the regulation on tourism statistics (EU 692/2011), member States accounting for less than 1 per cent of the total annual number of nights spent at tourist accommodation establishments in the European Union may further reduce the scope of observation, to include at least all tourist accommodation establishments having 20 or more bed places (alternatively 20 or more pitches). When such a limitation to the scope is applied, an estimate of the total number of nights spent during the reference year by residents and non-residents in the tourist accommodation establishments excluded from the scope of observation shall be transmitted annually.

The Finnish accommodation statistics are compiled by Statistics Finland based on monthly census of up to 1,500 accommodation establishments. The statistics cover accommodation establishments with at least 20 bed places or caravan pitches with electrical connection points. In 2012 the nights spent in Finnish accommodation establishments amounted to 20.3 million which is 0.8 per cent of the total nights spent in EU-28 countries. As this share is below 1 per cent, Statistics Finland has provided an estimate of nights spent in below threshold establishments based on administrative data sources.

Statistics Finland estimates that 2 million nights were spent in 2012 in 3,522 accommodation establishments with less than 20 bed places. These small establishments are predominantly businesses renting holiday homes or cottages / cabins. In terms of NACE Rev. 2 classification, these establishments are mostly in NACE class 55.2 (Holiday and other short-stay accommodation).

This paper provides a description of the methodology and data sources used for producing the Finnish estimate for below threshold establishments. The description is divided into three sections:

1. The methodology used for identifying the below threshold establishments in administrative data sources available to Statistics Finland
2. Calculation of the financial and non-financial indicators necessary for estimating nights spent
3. Quality assessment of the estimate including potential under- or over-coverage, timeliness and comparability to above threshold establishments

2. Methodology for identifying below threshold establishments

This chapter presents the methodology used for identifying below threshold accommodation establishments based on administrative data sources available to Statistics Finland. There are three administrative data sources used for identifying below threshold establishments.

1. Register of accommodation establishments

The register of accommodation establishments contains the local KAUs (kind-of-activity units) with at least 20 bed places. These roughly 1,500 local KAUs form the basis for accommodation statistics. The register is constantly updated and it can be linked to the other administrative data sources based on business ID and local KAU ID. The register contains contact information of the accommodation establishments as well as capacity data. The register acts as a frame for the data collection and compilation of accommodation statistics.

2. The Business Register

The Business Register is the core of business statistics for Statistics Finland. It contains annual data on enterprises, establishments and groups operating in Finland. The Business Register is classified using national industrial classification (TOL 2008) which is compatible with NACE rev 2. This makes it possible to identify local KAUs operating within the accommodation classes (55.1, 55.2 and 55.3). For estimating nights spent, the key data contained in the Business Register is the turnover of the local KAUs. The final annual data for the Business Register is typically updated in November.

3. Tax data on farm enterprises

The tax data on farm enterprises is based on tax declarations of Finnish agricultural and forestry enterprises. The economic activity of these enterprises is typically in NACE classes 01 - 03 (Agriculture, forestry and fishing). However, in the tax declaration these enterprises have reported the revenue obtained through provision of accommodation services. This sales figure can be used as for identifying those agricultural enterprises that provide accommodation services.

Figure 1 illustrates the process of identifying accommodation establishments based on the administrative data sources. The three available administrative data sources are shown as separate circles.
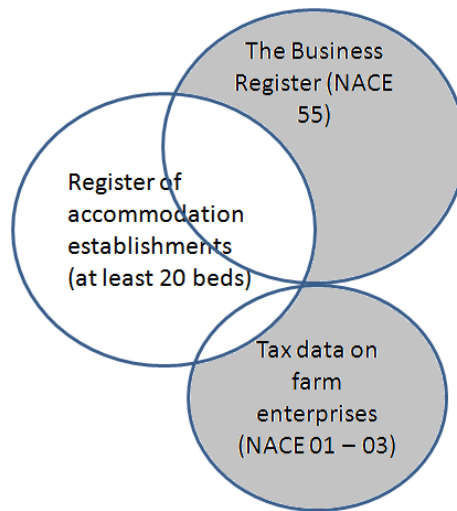

Figure 1. Administrative data sources

The register of accommodation establishments contains establishments with at least 20 beds and is the frame for collecting monthly accommodation statistics according to the regulation (EU 692/2011). The Business Register contains all local KAUs operating within NACE 55 (accommodation) class. Tax data on farm enterprises contains all enterprises that have reported sales revenue from accommodation services. These auxiliary data sources can be linked to the Register of accommodation establishments by using a common Business ID contained in all the data sources.

The grey area in Figure 1 indicates the local KAUs that are candidates for the estimate of below threshold establishments. These local KAUs, marked by the gray area, are not included in the register of accommodation establishments. However, they are either classified into NACE 55 in the Business Register or are agricultural KAUs with reported sales from accommodation services. In the 2011 data there were a total of 1,952 such candidate KAUs in the Business Register and 2,475 KAUs in the Tax data on farm enterprises.

These candidates were sorted by turnover and the KAUs representing 80 per cent of total turnover were manually checked with three possible outcomes for each KAU:

1. The KAU does not qualify as accommodation establishment (for example headquarters, sales offices). Such KAUs were entirely removed from the data set
2. The KAU is an accommodation establishment with at least 20 beds. These KAUs were added into the register of accommodation establishments and monthly data collection for accommodation statistics
3. The KAU is an accommodation establishment with less than 20 beds or the accommodation services provided are very minor -> KAU was included in the estimate of below threshold establishments;

The remaining KAUs that contribute less than 20 per cent of turnover were assumed to always belong to this group as their turnover is very minor.
Using the method described above, a total of 3,522 KAUs (out of 4,427) were identified as below threshold accommodation establishments with less than 20 bed places. Table 1. presents the breakdown of these KAUs by NACE class:

Table 1. Below threshold establishments (KAUs) by NACE class

NACE Class	NACE Class Description	KAUs	Turnover (M eur)
NACE 55.1	Hotels and similar accommodation	237	11.7
NACE 55.2	Holiday and other short-stay accommodation	3,234	46.7
NACE 55.3	Camping grounds, recreational vehicle parks and trailer parks	51	1.1
TOTAL		**3,522**	**59.6**

Nearly 92 per cent of all KAUs belong to NACE class 55.2 yet they contribute only 63 per cent of turnover of below threshold establishments. These businesses are primarily renting individual or a few holiday homes or cabins / cottages.

3. Estimating nights spent for below threshold establishments

The key question for estimating nights spent is how much turnover is generated per night spent. The turnover per night spent estimate should be provided separately for each NACE class, since the accommodation services provided are very different depending on NACE class. A night spent in a hotel or similar establishment is typically more expensive than a night spent in a cottage rented by a group of people. For this purpose, turnover data were extracted from the Business Register for those KAUs that are already included in the register of accommodation establishments. Also external sources were used for estimating the sales per turnover for holiday homes and cottages / cabins since this class is underrepresented in the accommodation statistics.

The turnover of a KAU in the Business Register contains more than just sales from accommodation services. A hotel could for example have a restaurant or conference facilities. The turnover per night is not to be mixed to the price per night spent paid by the client, which is typically lower as it is just the price of the room itself.

For the estimate of nights spent, Statistics Finland used turnover per night estimates for NACE classes 55.1 and 55.3 based on turnover of the establishments that are already included in accommodation statistics. For NACE 55.2 a lower estimate was used, which is based on the estimates of enterprises providing centralised reservation services for holiday homes and cottages / cabins. The estimate for turnover per night spent is only 25.49 EUR. Table 2. presents the turnover per night estimates that were used depending on NACE class.

Table 2. Turnover per night spent estimate by NACE class

NACE Class	NACE Class Description	Turnover per night spent
NACE 55.1	Hotels and similar accommodation	84.56
NACE 55.2	Holiday and other short-stay accommodation	25.49
NACE 55.3	Camping grounds, recreational vehicle parks and trailer parks	45.58
NACE 55.1 - 55.3		29.84

The estimate should also be provided separately for nights spent by residents and non-residents. This share was also calculated based on accommodation statistics. For NACE class 55.1 the share of nights spent by non-residents in hotels is used. For NACE classes 55.2 and 55.3 the share of nights spent in other establishments (than hotels) is used. Table 3 presents the complete estimate including number of establishments, nights spent in total and separately for non-residents and residents.

Table 3. Estimate of nights spent in below threshold establishments

NACE Class	NACE Class Description	Number of establishments	Turnover (M EUR)	Turnover per night spent (EUR)	Share of nights spent by non-residents	Nights spent (000)	Nights spent by residents (000)	Nights spent by non-residents (000)
NACE 55.1	Hotels and similar accommodation	237	11.7	84.56	23 %	139	107	32
NACE 55.2	Holiday and other short-stay accommodation	3,234	46.7	25.49	21 %	1,834	1,451	384
NACE 55.3	Camping grounds, recreational vehicle parks and trailer parks	51	1.1	45.58	16 %	25	21	4
TOTAL 2011 estimate		**3 522**	**59.6**	**29.84**	**21 %**	**1,998**	**1,579**	**420**

At the time of calculating the 2012 estimate the reference data from Business Register and Tax data for farm enterprises is only available for the previous year (2011). The bottom line in Table 3 contains the total estimate for the year 2011 while the estimate needed to be provided for year 2012. For this purpose and extrapolation coefficient can be calculated based on annual change in nights spent based on accommodation statistics. However, after removing the impact of frame expansion due to the regulation in 2012, the annual change in nights spent according to accommodation statistics was zero per cent. Consequently the estimate for 2011 was used as such for the reference year 2012.

4. Quality assessment of the methodology

The obvious strength of the current methodology for estimating nights spent is that no new data needs to be collected. The methodology takes advantage of administrative data sources already available to the national statistical institute. The coverage is good for the local kind-of-activity

units that are classified into NACE classes 55 (Accommodation) and 01 - 03 (Agriculture, forestry and fishing). The drawback is that many providers of accommodation services operate outside of these NACE classes. No method has been identified so far for identifying these KAUs that do not provide accommodation services as a primary economic activity.

There is also a timeliness issue related to updating the administrative data sources. The regulation (EU 692/2011) requires the transmission of the estimate to be made in 6 months after the end of the reference year. However, the administrative data sources are typically updated only after 10 or 11 months. This issue can be compensated by introducing a coefficient based on the annual change in nights spent in accommodation statistics.

The methodology is founded on the turnover and sales data contained in the administrative registers. The turnover of an enterprise may be comprised of many other items besides sales of accommodation services. Also the share of accommodation services varies depending on enterprise.

Due to these limitations, the estimate obtained by using the methodology should be considered as an approximate only. However, it does provide an indication of the nights spent in below threshold establishment that can be consistently repeated each year for consistent estimates.

5. Conclusions

This article has described the methodology used in Finland for providing the nights spent estimate required by the regulation (EU 692/2011) for accommodation establishments below the threshold of 20 bed places. The methodology relies on administrative data sources available to Statistics Finland, namely the register of accommodation establishments, the Business Register and Tax data on farm enterprises.

The formula for calculating total nights spent for a NACE class is the following:

$$nights\ spent_{NACE} = \left(\frac{turnover_{NACE}}{turnover\ per\ night_{NACE}} \right)$$

The estimate can be adjusted based on annual change in accommodation statistics in case there is a timeliness issue with the administrative data sources available. The regulation requires the estimate to be provided separately for residents and non-residents, which can also be estimated based on accommodation statistics.

References

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