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Abstract for Poster Presentation:

Using alternative data for German turnover indicators in the service sector



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1. Summary

German short-term statistics on turnover (and employment) in the service sector comprise sections H and J as well as large parts of sections M and N of the European statistical classification of economic activities (NACE Rev. 2). They are produced in accordance with the European Regulations on short-term statistics.¹ In short-term statistics turnover is measured in the form of indices, currently based on 2010. The weights for producing the indicators in Germany stem from the annual structural business survey for the services sector. The indices indicate trend information rather than level information. Preliminary results are available 60 days after the end of the reference quarter, revised results 90 days later and final results after 180 days. The indices are made available to the public in an unadjusted form as well as in a working-day and seasonally adjusted form. From the first quarter of 2003 to the first quarter of 2007, the quarterly indices of turnover in short-term statistics were produced with the help of a 7.5 % stratified random sample survey. Since the second quarter of 2007, turnover data in short-term statistics have been obtained with the help of a multiple-source mixed mode method². However, as the revision 2 of the NACE resulted in extensive classification changes for the whole service sector, data series before 2008 are of limited significance and comparability.

The multiple-source mixed mode method combines a primary survey conducted among large enterprises (i. e. with an annual turnover of at least 15 million euros and/or with at least 250 employees) with administrative data for small and medium-sized enterprises. Enterprises are obligated by national law³ to provide information (online). Administrative data on turnover are provided by the tax authorities of the 16 German states (*Länder*), the data stemming from turnover tax prepayment notices. The multiple-source mixed mode method was introduced in order to reduce the response burden. The latter was only possible for small and medium-sized enterprises. The survey among the large enterprises and enterprise groups ensures the quality of the results and keeps revisions at bay.

Minor drawbacks of the administrative data, which do not fully meet the demands of short-term statistics, involve the definition of turnover within the tax prepayment notice. The tax definition of turnover differs in some respects from the statistical definition. The statistical definition does not include, for example, some extraordinary receipts (such as rental income from company-owned machinery or dwellings, sales of land or of used machines etc.). However, these are included in the tax prepayment notice under the same heading as the statistically relevant services. Another – more important – issue is the character of an early estimate of the value added tax prepayment notice that depends on the unit's financial situation. In addition, in tax legislation, several enterprises might be combined in an integrated turnover tax group. In this case the breakdown of turnover is difficult. The reason is that only the controlling unit reports the

¹ Regulation (EC) No 1165/98 and Regulation (EC) No 1158/2005 of the European Parliament and of the Council

² For details see Fischer, Hanna/Oertel, Jutta (2009): *Konjunkturindikatoren im Dienstleistungsbereich: Das Mixmodell in der Praxis*, in *Wirtschaft und Statistik*, Wiesbaden, WiSta 03/2009, p. 232 ff.

³ Gesetz über konjunkturstatistische Erhebungen in bestimmten Dienstleistungsbereichen (*Dienstleistungs-konjunkturstatistikgesetz – DLKonjStatG*); Gesetz über die Verwendung von Verwaltungsdaten für Zwecke der Wirtschaftsstatistiken (*Verwaltungsdatenverwendungsgesetz – VwDVG*).

total group turnover to the fiscal agency, without providing any information about how this total turnover is distributed among the different enterprises in the turnover tax group. Another issue is that the activity code in turnover tax data does not entirely meet statistical requirements. This is less a problem of standardisation – as the classifications are very similar –, but an allocation problem. A methodological test showed that the NACE code allocated to a single unit might vary depending on the data source.⁴

In German short-term statistics on the “other services” sector the problems mentioned are treated with regard to their effect on the quality of the results. The survey covers 40-60% of the turnover and takes precedence over the administrative data. Only units that provide data *from the same source* for both the reference quarter and the previous quarter will be included in the index calculation (“pairing principle”). Destatis improves the data quality with respect to short-term statistical needs by applying editing procedures and by using estimates and additional information from the business register. Owing to a legislation amendment concerning the use of administrative data for statistical purposes⁵, Destatis and the Statistical Offices of the *Länder* are now authorised to clarify inconsistencies in the turnover tax data directly with the enterprises and to correct the data accordingly.

The implementation of the multiple-source mixed mode system resulted in a clear reduction of the statistical reporting duties of small and medium-sized enterprises. For instance: in order to produce short-term statistics in 2016 less than 1.0 % of the entire enterprise population in the relevant service branches had to be surveyed directly (instead of approximately 7.5 % of the enterprises that had to be questioned quarterly before the implementation). At the same time the combination of survey and tax data produces a nearly complete count of the population. This makes a good case for the quality of the data.

As for the future, the (growing) importance of the service sector in European economies leads to an increasing demand for detailed and up-to-date information on the service industries. This results in an extension of statistical requirements by Eurostat. Within the new European regulation framework for business statistics, short-term statistics will probably undergo the following changes. New branches such as real estate activities will be included in the delivery commitment. In short-term-statistics the “kind-of-activity unit” will replace the “enterprise” with the aim of better reflecting diverse market activities of one enterprise. In contrast to that European structural business statistics will be reporting on the “complex enterprise” as an entity with the aim to take the structures of enterprise groups into account. Most important is the expected replacement of the quarterly turnover index of service statistics by a monthly index. There is good reason to believe that this index can also be produced by the multiple-source mixed mode system. On the whole, this would increase the burden on enterprises by a factor of about four. With a traditional survey it would be about 10 times as much. Finally, the European aim is to produce a monthly index of service production, which will require the development of adequate deflators.

⁴ Lorenz, Robin (2010): *The integrated system of editing administrative data for STS in Germany, ESSnet Administrative data, Seminar in Rome*

⁵ *Gesetz über die Verwendung von Verwaltungsdaten für Zwecke der Wirtschaftsstatistiken (Verwaltungsdatenverwendungsgesetz – VwDVG)*