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**PLANS FOR THE DEVELOPMENT OF A MONTHLY
INDEX OF SERVICES IN THE UK**

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PLANS FOR THE DEVELOPMENT OF A MONTHLY INDEX OF SERVICES

- The ONS is planning the development of a monthly index of gross value added in the service sector
- This is in response to demand from customers such as HM Treasury and the Bank of England and will mark a significant advance in the measurement of economic activity in the service sector
- A prototype series, covering the entire service sector, is planned for release in December 2000
- Initially, there will be limitations on the achievable data quality but there will be a continuing programme to introduce improvements
- The development is still at the planning stage: comments are invited

1 Summary

1.1 The ONS is planning a major project to develop a constant price monthly Index of Services (IoS), which will mirror the established Index of Production (IoP) by indicating the month-on-month percentage changes in gross value added in the service sector. This builds on previous work by the ONS to develop the statistical information on the service sector and has been identified as a top priority by both HM Treasury and the Bank of England.

1.2 This paper aims to give an overview of the current plans and to seek comments and advice. These plans are ambitious; in the UK, as in other countries, there is a scarcity of suitable monthly data for service industries and producing reliable output indicators for many types of services is technically challenging. To address these difficulties, there will therefore be a continuing programme of research and development.

1.3 For the next few years, however, the inherent difficulties of developing a monthly index will impose limitations on the data quality that is achievable. For that reason, the IoS will initially be released as a prototype indicator only.

2 Coverage of the IoS

It is intended that the IoS should cover the entire service sector, including both government services and those provided by the private sector. Together, these account for around 70% of gross domestic product (GDP), with private sector services alone making up over 50% of GDP. There will be a programme to expand the coverage of monthly source data but, in order to achieve full coverage, it will be necessary to interpolate a monthly path in some areas, especially in the early stages.

The sections of the SIC 92 (Standard Industrial Classification) that the IoS will cover are:

SIC section	1995 value-added weights (GDP= 1,000)	Description
G	116.9	Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods. (To be covered by the Index of Distribution).
H	29.0	Hotels, restaurants and catering
I	82.5	Transport, storage and communication
J	67.4	Financial intermediation
K	183.5	Real estate, renting and business activities
L	61.2	Public administration and defence; compulsory social security
M	56.0	Education
N	64.6	Health and social work
O	38.3	Other community, social and personal service activities

3 IoS methodology: some of the main issues:

IoS to be a measure of the value added by the UK service sector

3.1 Users would ideally like a constant price index of value-added, to provide a more timely indication of movements in the services component of GDP.

Conceptually (in simple terms): -

$$\begin{aligned}
 \text{value added} &= (\text{total}) \text{ output} - \text{inputs} \\
 &= \text{turnover} - \text{purchases of inputs for intermediate} \\
 &\quad \text{consumption} + \text{changes in inventories} + \text{own account} \\
 &\quad \text{capital formation}
 \end{aligned}$$

3.2 However, in practice, it is difficult (and costly) to measure all of these components monthly. Instead, in the IoS (as in the IoP and the quarterly GDP(O) series for the service sector), movements in value added will be proxied using measures of total output. Provided it can be assumed that the ratio of outputs to inputs remains constant, movements in output will give a good approximation of movements in value added. In most cases, at least over the short term, that assumption is reasonable.

Deflated turnover indicators generally preferred wherever possible

3.3 In general, and in line with Eurostat recommendations, the preference will be to use turnover, deflated by an appropriate price index, as the output proxy indicator.

3.4 Particularly in the early stages, there will also be some use of volume measures (such as the number of railway passenger miles) and other output proxies (such as the deflated value of bank deposits). These are usually less satisfactory, however. They are likely to ignore any changes in the quality of the service and it is not normally possible to define the entire output of service industries in terms of such quantity measures.

3.5 In the case of government services and a few other areas, including parts of financial intermediation, it will also be necessary to use measures of inputs, such as employment or salaries, as indicators of output. Like volume output indicators, they may ignore changes in the quality of the service. In addition, even though compensating adjustments are made where possible, it is difficult to take account of productivity gains reliably where input indicators are used.

Indicators weighted on value added: movements shown as index numbers

3.6 The indicators used in the IoS will be weighted together according to individual industries' contributions to value added in the base year (which will, initially, be 1995). Values for the IoS and its component series will be presented as constant price index numbers. In both these respects, therefore, the monthly IoS will be consistent with the methodology used for the IoP and quarterly GDP(O).

Coherence with other indicators

3.7 Potential users have made it clear that it is very important that the IoS should be coherent with other economic indicators. In particular, it is recognised that the IoS needs to be consistent with the values for the service sector in the quarterly estimates of GDP(O), as both will be measuring the same variable. The monthly IoS will, therefore, be constrained to the path of the quarterly GDP series for the service sector.

Treatment of inventories and work-in-progress

3.8 Inventories of finished goods of companies' own production (as opposed to inventories of goods purchased for resale) are assumed not to be significant in service industries. However, in theory, the proxy indicators used in the IoS should be adjusted for the value of changes in work-in-progress, as such changes correspond to changes in output. In practice, though, work-in-progress will only be significant in some industries (such as law and design consultancy) and measuring it on a monthly basis would require additional survey data. For these reasons, there will be a feasibility study before any decision to attempt to adjust for work-in-progress in the IoS.

3.9 Changes in inventories of goods purchased for resale (e.g. wholesale or retail stocks), on the other hand, do not constitute changes in output. There will, therefore, be no need to adjust the proxy indicators used in the IoS for changes in inventories of such goods.

4 Practical issues/difficulties in developing a monthly IoS

Monthly turnover data

4.1 Currently, only around 35% of the service sector as a whole and around 45% of private sector services are covered by established monthly output indicators or proxies. In addition, in areas such as financial intermediation, although monthly data are available, it is recognised that further work to improve the quality will be needed. This is in contrast with manufacturing, in which there are reasonably robust monthly data covering the entire sector. To remedy this, ONS is committed to improving both the coverage and the quality of its monthly statistics on the service sector as part of the IoS development programme. Nevertheless, it needs to be recognised that, at least for the next 2-3 years, the scarcity of

suitable monthly source data is still likely to be a constraint on the accuracy/quality of the IoS.

Price data for deflation

4.2 Given the general preference for the use of deflated turnover indicators, the availability of suitable price indices for use in deflation is a key requirement in ensuring the reliability of the IoS. Monthly retail price indices are produced for the most important services sold direct to consumers, such as house insurance and motor vehicle repairs. However, just under half of the value added in private sector services comes from business-to-business or 'corporate' services such as industrial cleaning and corporate legal services.

4.3 For a number of years, the ONS has been developing Corporate Services Price Indices (CSPIs) to cover these and already publishes 12 series for individual industries. In addition, a further 12 are produced in preliminary form and will soon be ready for publication. Together these account for around half of the value added by the corporate services sector. The aim is to cover the entire corporate services sector by the end of 2001 but this depends on some difficult development work. The industries in which development is less advanced include many of those for which production of robust price indices is most problematic, such as law, accountancy and most of the consulting-type industries.

4.4 In addition, CSPIs are currently produced on a quarterly basis only and monthly data collection is unlikely in the foreseeable future. The ONS will, therefore, need to devise methods to produce monthly paths between quarterly CSPI values. Options include interpolation and the use of alternative, though less appropriate, indicators such as retail price indices (RPIs) or wages and salaries.

Sales information for the services industries

4.5 To produce indices suitable for use as deflators in the IoS, detailed CSPIs and/or RPIs need to be weighted together. However, reliable detailed data on the sales of individual services are lacking. It is, therefore, difficult to construct deflators that are truly representative of the pattern of each industry's sales. Manufacturing is covered by the PRODCOM survey, which collects quarterly or annual data on producers' sales at product (i.e. 8-digit SIC) level, but an equivalent survey in the service industries would be extremely costly and is not planned as yet.

Development of monthly output measures not always straightforward

4.6 Although there will be a general preference for measures of output (and, in particular, deflated turnover) as the proxies for gross value added, selecting or devising the most suitable methodology will not always be straightforward. In industries such as financial services and insurance, for example the definition of value added is complex and it is not yet clear how best to measure this on a monthly basis.

5 Plans for the development of the IOS: an outline

5.1 To develop a comprehensive IoS as rapidly as possible, whilst, at the same time, introducing quality improvements, a multi-track approach is envisaged :

- the first track is to set up a monthly Index of Distribution (IoD), based on the current GDP(O) methods, data sources, and computer system. The aim is to produce this by December 1999.
- the second track is to produce, by December 2000, a monthly constant price index of services covering the entire service sector. To enable this, there will be an expansion of the ONS's Monthly Turnover Inquiries, together with improvements to the results processing methodology. Where the data used in quarterly GDP(O) are available monthly, they will be used in the IoS. Where GDP(O) turnover, price or proxy data are not available monthly (as, for example, in government services), a monthly path will be interpolated.
- the third track is to continue the expansion of the coverage of the Monthly Turnover Inquiries and the enhancements to the results methodology.
- the fourth track is a parallel programme of research and development.

Review of data/methodology for the whole service sector

5.2 The fourth, research and development, track is seen as one of the main elements of the IoS development project. The process is expected to start in early 2000 and continue into 2001 (and possibly beyond). It will include:

- reviewing the quality of monthly turnover and price indicators where these already exist
- developing and implementing turnover/price indicators in the more 'difficult' industries in which none currently exist
- recommending/developing new methodologies and/or new types of data collection. This will be both to expand the coverage of monthly data into industries for which deflated turnover indicators would be inappropriate and to improve the existing methodology where this is considered necessary

The reviews of more 'difficult' industries (such as banking and insurance), in particular, are likely to entail a 'task force' approach and bring in expertise/advice from outside the ONS.

Administrative data: use of VAT

5.3 In addition to the expansion of monthly collection of turnover data, the feasibility of using administrative data will be explored. It is possible that turnover information collected along with Value Added Tax might yield monthly turnover estimates by industry. If this were achievable, there could be significant savings both for the ONS and to respondents to ONS surveys. However, there are difficult methodological and operational problems to overcome before any results can be produced. In addition, a new computer system would need to be developed. Even if the feasibility study proved successful, it is unlikely that any results could be produced until 2002 at the earliest.

6. Planned outputs: summary

The plan is to produce :

a **prototype** monthly Index of Distribution (covering section G of the SIC - the sale and repair of motor vehicles, wholesale and retail distribution) in December 1999.

a **prototype** monthly Index of Services (covering SIC sections G-O) in December 2000.

a **developed** Index of Services, published via a monthly First Release, in late 2001/early 2002

7. Conclusion

This article has given a broad outline of the ONS's plans for developing a monthly Index of Services. These are still at a relatively early stage; comments or suggestions about the proposals would, therefore, be especially welcome. Such comments may be sent to either of the authors at the contact points given below.

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