

UK WORKING PRACTICES THAT ALLOW AN EARLY DELIVERY OF THE PRODUCTION INDEX

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SUMMARY

The Index Of Production is a monthly series measuring changes in industrial activity. Countries within the EU present their figures to Eurostat at varying times. This paper sets out to show how the UK Index of Production is produced within 26 days, setting out the importance of the Index and the processes used to achieve the target date. It also considers whether the time period could be improved upon and if so at what costs to the accuracy of the Index.

INTRODUCTION

The Index Of Production is a monthly series measuring changes in industrial activity. It is a key short-term indicator used by the Bank Of England and the Treasury, as well as other Government departments and outside organisations, it measures about 27% of the UK economy. It is produced using turnover data. The First Release is published 26 working days after the end of the month and presented at the monthly press conference.

MONTHLY PRODUCTION INQUIRY

The main source of data for the Index of Production is the Monthly Production Inquiry (MPI). Data is also provided by other government departments, for example the Ministry for Agriculture, Fisheries and Food provides information on the Food Industries. Outside organisations also supply data, for example the Motor Trade Association provides data on the production of cars. A limited amount of the data received is quarterly and so must be adjusted to cover the correct reporting period.

The MPI is a compulsory survey - it is required by law that the forms are completed and returned. Enforcement can be used if a company does not return forms for three consecutive months. A stratified random sample of 9,000 out of 160,000 registered companies is taken. Companies with a large number of employees are sampled every month, and smaller companies stay in the sample for 15 months before being replaced. The inquiry form is a single page form. It asks for gross turnover for the month, which most companies are able to supply. Most other countries ask for volume measures but this can ignore quality improvements. The form also requests figures for Employment, Exports, Merchant Goods and Orders on Hand.

USING TURNOVER DATA

To some extent production data are not available monthly because there is no appropriate statistical survey. Turnover data are, however, usually based on their own separate survey and are therefore usually available. In sectors with extensive product ranges turnover data can be collected more easily and more economically than production data. Current turnover is also frequently available more quickly than collecting a large number of production quantities.

In order to exclude pure price effects, a deflation with the appropriate price indices is necessary. Producer Price and Export Price Indices are used. As a result a volume measurement is obtained. The indices are derived from measurements through the application of a weighted mean, with weights derived from the value added in the base year, currently 1995. Quality differences and changes in the individual products are reflected in turnover, so the producer price indices must also take account of such influences.

The turnover index actually measures production sold at the market, this can differ from the target of production activity. Produced goods can go into stock or products can be sold ex stock. Also the intermediate production of finished/semi-finished products for further processing in the same company are not taken into account. These differences need to be taken out by using information on the change in inventories. From a methodological point of view, value added figures would be preferred to turnover. However, the practical advantages of turnover outweigh any doubts.

PRODUCING THE IOP

The first department involved in the process is responsible for sending out the forms and scanning them when they are returned. The sample is selected and the forms sent out a week before the end of the month, so the companies have the forms ready to fill in at the end of the period. As forms are returned they are scanned and the data is held on a shared computer system. All departments have access to this system, but at different levels.

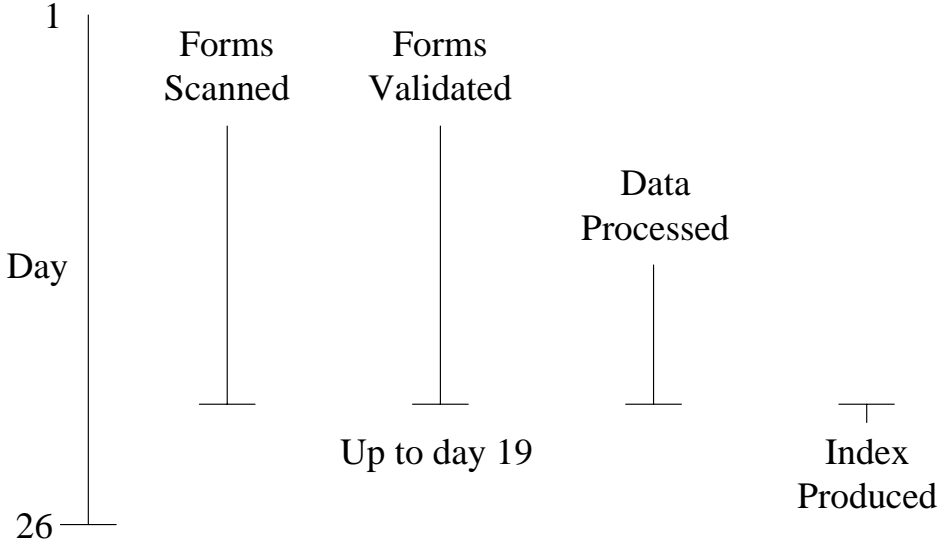
The next department involved in the process (the Data Validation Unit) is responsible for validation and collection of data. Once the forms are on the system they are validated. The system automatically date adjusts the data and adjusts for £,000 errors. Any that fail the validation and can not be explained are then queried with each company, any information gathered from these queries is added to a Lotus Notes database that stores all comments. The centralisation of the data validation department has led to investment in scanning technology that has increased the proportion of forms scanned. In a recent US survey the UK had the highest proportion of scanned forms of any national statistical office.

Target is to achieve an 80% response rate before producing the published index. After the return deadline has passed non-respondents are contacted first by post then if they still do not return the data they are contacted by telephone. At this stage it is requested that the data be returned by fax or over the telephone. Key respondents are targeted first but even the smallest companies can be telephoned. Lunchtime transfers used to clear errors for final pass. New initiative currently being looked at, to forward leaflets to new contributors in order to provide more information about National Statistics.

Once there is sufficient data to work with the next stage of the process starts. Any missing data is imputed to account for non-respondents, and final checks are done on the data. On day

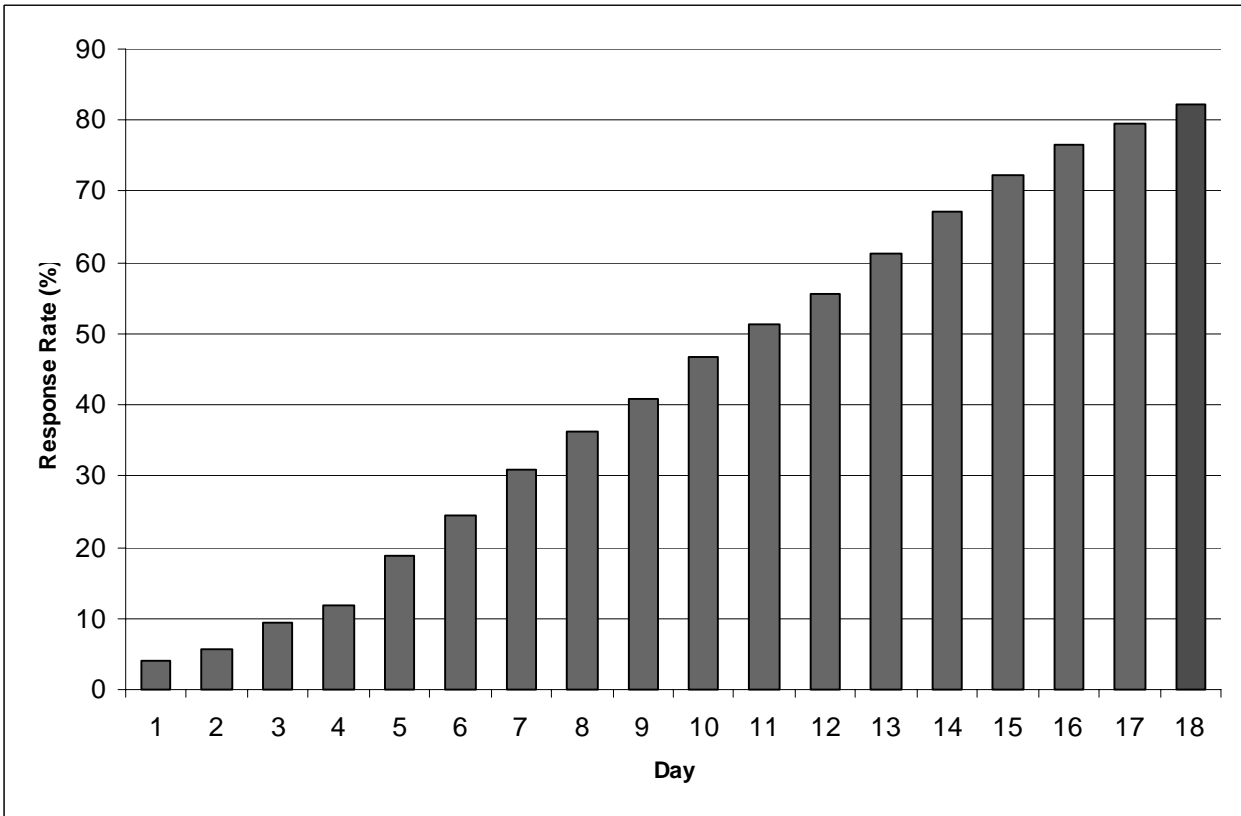
19 the data is frozen and passed over to the results and analysis division. The gross turnover figures are deflated using Producer Price Indices and information about changes in inventories is taken into account. They then produce the index and a press release is published on day 26.

Time Scale



An important feature of the process is the way the different departments work parallel to each other. Provisional results are run so that each department does not have to wait for the previous one to finish before they can start. There exist good lines of communication between departments allowing them to interact at every stage of the process. A query database exists between the validation and processing departments, one is also being implemented between the results and processing departments. Up to day 22 departments stay late to answer any last minute queries that may arise.

RESPONSE RATES



The target is to get an 80% response rate, so that the index can provide accurate information a short time after the period and revisions are kept to a minimum. The average response rate is 83% at the end of day 18, this can vary month on month depending on holiday periods or other events that could delay returning of forms. The length of the process could be reduced by accepting a lower response rate, for example

60% response rate results in 5 day reduction

70% response rate results in 3 day reduction

The cost of a reduced response rate would be that index would be less accurate and more revisions would be needed.

CONCLUSION

At the expense of the response rate, an earlier production of the index could be achieved but the accuracy would have to be questioned. Having a target rate of 80% response means there is little scope to quicken the process significantly. The key to obtaining the target rate of 80% response by day 19 is achieved in the main through chasing non-respondents from an early stage. The other key factor is that the sections have good lines of communication with one another and work alongside each other to maximise efficiency.