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TOWN CENTRES: DEFINING BOUNDARIES FOR STATISTICAL MONITORING

by

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I. INTRODUCTION

1. In the UK there is little nationally consistent information on town centres currently available. It is over a quarter of a century since the last Census of Distribution which provided detailed information on retailing, a key town centre activity. In recent years it has been recognised that there is a need for reliable statistics to assist in monitoring the vitality and viability of town centres. This need was re-emphasised by a Parliamentary Select Committee on Shopping Centres and their Future in 1994.

2. The UK Government determined that the best approach to improve the availability of retail and other information for town centres should be to make the fullest use of existing sources of data and to limit new data collection to those areas not covered by existing sources. This would provide the most cost-effective method and minimise the additional burden on the retail industry. To generate this information, geographically referenced town centre boundaries would need to be defined in order to compile nationally consistent statistics.

3. The Department of the Environment, Transport, and the Regions (DETR) commissioned a feasibility study from the Centre for Advanced Spatial Analysis (CASA) at University College London, and the Urban and Economic Development Group (URBED). The principal aim of the study was **to establish a method for defining the extent of town centres geographically, on a consistent basis *for statistical purposes***. DETR was advised during the project by a steering group consisting of local authority planners, consultants and leading academics in the fields of planning and retail statistics.

II. THE RESEARCH MODULES

4. During the project, surveys of previous work on defining and classifying towns, and of the current views of academics and researchers were undertaken. This work led to the identification of key factors (see paragraphs 5 to 11 below) that characterize town centres. The project attempted to quantify these factors using existing geographically referenced data sources.

5. Defining the **activities and facilities** that are traditionally associated with town centre locations is a powerful means of identifying the town centre; similarly, identifying those that are not association with the town centre is also useful. By mapping *publicly accessible floorspace* (such as that associated with retailing, leisure and local government land uses) the main destinations of people visiting the town centre could be identified. A concentration of these accessible land uses would be expected to be found within the town centre area. However a town centre is more than a public space, it also is a place of work. Hence by mapping *town centre employment* (such as retail and office) it should be possible to locate the various functions associated with the town centre. Conversely, by mapping *non-town centre employment* (such as manufacturing) those areas which are highly unlikely to be the town centre could be identified.

6. **Diversity of use**, ie *diversity of employment* was also identified as a key indicator of the town centre. Town centres are cosmopolitan places and incorporate many different functions. Activities tend to become considerably more homogenous and segregated away from the central area.

7. **Intensity of use** has traditionally been greater in the centre of town than elsewhere. This could be reflected in two basic ways:

a) *Property values*: in general, land and property values increase as the centre of town is approached, reflecting the demand for space in these areas;

b) *Plot densities*: building densities are often higher in town centres as development land is at a premium.

8. The town centre must not only be accessible to the population it serves (in terms of both public and private transport) but also be internally accessible to the pedestrian. Using basic network algorithms it should be possible to define **pedestrian gateways,** or the pedestrian catchment areas of key nodes or gateways to the town centre (public transport termini and car parks), and then to combine these to give an overall impression of accessibility.

9. **Resident population**, or rather the lack of it is currently a fundamental characteristic of many UK towns. The development of retail, commercial and leisure activities in the centre of towns has inevitably precluded residential land use, at least on the ground floor, so that central areas generally have relatively low population densities.

10. **Turnover** for *retail and entertainment uses* is likely to be greater in the town centre than elsewhere in the town.

11. **Visitor attractions** are important magnets in town centres, bringing in additional revenue and people over and above that which might be predicted for the town. As well as tourist attractions, such as cathedrals and museums, local markets are considered to be important.

12. For each town, a study area (based on a fine grid) was defined to cover the full extent of the urban area. Within this area, each key factor was modelled using a Geographic Information System (GIS), so that every 20 metre grid square was assigned a relative value. These values could then be used to generate a surface, or series of contours, that represented the graduation of the factor throughout the study area. Each surface was referred to as a module.

13. These seven modules could then be combined into a composite 'Index of Town-Centredness' surface for the study area.

III. CASE STUDIES

14. The modular approach was put into practice in twelve case studies, selected to represent a broad range of town centres. The case studies were Abertillery in South Wales; Bristol and Tewkesbury in the South West; Andover and Gravesend in the South East; Wandsworth, Putney and Clapham Junction in London; Wolverhampton in the West Midlands; Warrington in the North West; and Skipton and York in the Yorkshire and the Humber region.

15. The method and results were reviewed and endorsed by local authority officers in each of the case study towns, and also by an advisory group of experts. In all twelve cases it was possible to locate the town centre, and to produce a graduated surface of 'town centredness', purely by using the data in the modules. Furthermore it was possible to select an acceptable 'key contour' on the composite surface of town centredness, which represented the extent of the 'town centre' for which statistics would be required. In all cases, the town centre delimited by the key contour matched the perceptions of local planners of their own town centre to a remarkable degree. The area defined by the key contour was referred to as the town centre's 'Central Statistical Area'.

IV. ROBUSTNESS OF RESULTS

16. The case studies showed that no single module was sufficient to define an acceptable Central Statistical Area. The strength of the modular approach was the combination of the modules, each designed to reflect different aspects of 'town centred-ness'. Furthermore in

combining the modules the overall Index was quite robust to the weighting given to the separate component modules. When weights were added they had to be grossly exaggerated in order to effect the extent of the Central Statistical Areas markedly. It was therefore concluded that the modules should be given equal weight in the Index.

17. The principal governmental data sources used to construct the modules are the Office for National Statistics Inter-Departmental Business Register (IDBR), which holds information on employment and turnover for individual businesses, and the Valuation Office Agency property floorspace database.

18. These datasets are second to none in national coverage, comprehensiveness and accuracy of business and property information. However, like for most large databases, particularly when used for purposes for which they were not designed, there was evidence of some potential errors in the data. It might have been expected that the effect of such errors in the underlying data would be compounded by the combination of the modules. Instead it appeared that in general a deficiency in one dataset tended to be cancelled out by another dataset. Hence the definition of the Central Statistical Area was not noticeably affected by the variation in quality of individual data sources.

V. GENERATING TOWN CENTRE STATISTICS

19. As well as being used to construct the modules, employment, turnover and floorspace are also the principal statistics required on a town centre basis. These and other data required for town centre statistics are commonly geo-referenced by unit postcode. This is the most disaggregated unit of postal delivery points. It represents a 'postman's walk' and thus is a collection of addresses rather than an area with a well defined boundary. However it can be represented by a central point, or centroid which reflects the spatial average of the delivery points on the walk. In generating aggregate town centre statistics from such data sources, therefore, it was the set of unit postcode centroids in the Central Statistical Area that was important, rather than the exact location of a boundary line.

20. By determining a list of Central Statistical Area unit postcodes, the project produced, for example, illustrative aggregate estimates of retail turnover, retail employment and floorspace, and commercial employment and floorspace for each of the case studies.

VI. A NEW URBAN CLASSIFICATION AND CORRELATION OF RESULTS

21. As part of the project, a new urban classification was developed from existing data sources, which classified towns by a series of macro indicators. This classification was used to select the case studies. Its broader purpose, however, could be to automate the delimitation of the Central Statistical Area for every town by relating the selection of the key contour to the macro indicators.

22. Initial investigation, albeit relying only on the twelve case studies, showed that there was strong correlation between the Index of Town-Centredness of the key contour and the macro indicators. This suggested that automation of the method might be feasible, with further research. Similarly, there was strong correlation between the macro indicators and the generated aggregated town centre statistics, suggesting that the key contours represented a fair delimitation of the town centres.

VII. USE OF THE CENTRAL STATISTICAL AREAS

23. It is worth emphasising that the aim of the research was to produce town centre boundaries for extracting or assembling statistics for town centres. The resulting boundaries

are specifically **not** intended to define town centres for planning policy purposes. For example, it is not the intention that town centres defined in local plans would be superseded by defined Central Statistical Areas.

24. However, as well as generating nationally consistent town centre statistics, the method could have other applications in validating national datasets, local data collection exercises, and ultimately as a decision support tool.

VIII. FURTHER RESEARCH

25. The research, whilst being able to successfully produce Central Statistical Areas and statistics for the twelve town centres in the case studies, was only a feasibility study. Further research will be required before the method could be applied on a national basis. The Department of the Environment, Transport and the Regions will be considering how this work should be taken forward.