For ASSESS York 2017 meeting

AN INTRODUCTION TO IBM SPSS STATISTICS FOR COMPLETE BEGINNERS

(10am to (approx) 4-30pm including (approx) two 20 minute coffee breaks and lunch break)

Keith Bentley **University of Salford**

Target Audience

Members of any company who are interested in using data, possibly from a variety of sources, to develop corporate and business strategies to identify goals, set and monitor targets and improve the effectiveness of their employees.

The course tutor, Keith Bentley, is a former senior police officer currently lecturing at the University of Salford. He has given talks (identifying crime hotspots) and courses (Introducing IBM SPSS Statistics syntax using the British Crime Survey) for ASSESS at past meetings. He is a regular user of the statistical software, IBM SPSS Statistics, and specializes in the Field of police intelligence systems. Keith is also engaged as an intelligence expert with the European Union TAIEX organization.

Pre-requisites

This workshop is suitable for users who have no prior experience using SPSS.

Aim

The forthcoming training session will be making use of a very large data set, a copy of a BCS survey with over 46,000 cases and 3000 variables. This one-day course is aimed at complete beginners to IBM SPSS Statistics. It introduces basic concepts and structures and uses these to read in and prepare data ready for analysis and perform data manipulations using core commands. The teaching material references contemporary Level 6 university input. Although the emphasis is on crime data this course is also suitable for anyone from any company or organisation in that it provides a general framework for data analysis which can be used to guide policy decisions.

Learning Outcomes

By the end of the course, you will be able to:

- Use the IBM SPSS menu interface
- Open and save Data Files
- Enter and define data
- Produce simple descriptive statistics and one and two-way tables
- Use commands for calculations and selection
- Plot simple graphs
- Use basic syntax

DETERMINING AREA TYPES: BY CLASSIFICATION USING K-MEANS CLUSTER ANALYSIS AND BY DEVELOPING A DEPRIVATION INDEX

(10am to (approx) 4-30pm including (approx) two 20 minute coffee breaks and lunch break)

Paul Norman **University of Leeds**

Target audience:

This workshop is suitable for SPSS users (who are likely but not expected to have prior knowledge of multiple regression whether OLS or logistic) interested specifically in how area characteristics may relate to an outcome of interest or more generally in data reduction techniques.
The course tutor, Paul Norman of the School of Geography, University of Leeds, is a population and health geographer who has wide experience of deriving and using location characteristics in both area and individual level research.

Aim

Starting with a non-risk assessed practical using kitchen utensils and cutlery (Intrigued? You should be!), this course will introduce participants to methods that cluster geographically distant places together on the basis of socioeconomic commonalities. Clustering techniques underpin geodemographics, the "classification of small areas according to their inhabitants" (Rothman, 1989: 1). Geodemographics has mainly been used in business applications but is increasingly used in social sciences to differentiate between outcomes occurring in different types of places. Precalculated classifications, such as the ONS Supergroups, are often attached to individual records in survey data and health records.

There are several clustering methods, the commonest being k-means classification. In this one day course we will first cover why and how classification is carried out and then derive area typologies using k-means in SPSS for the Lower Super Output Area geography using census data.

Having looked at one way of determining area type, we will then take a different stance. Deprivation indexes are regularly used in health research and for planners to target resources for regeneration policies. We will develop a deprivation index using census data, as above for the Lower Super Output Area geography. We will compare our outputs with the classification above and with the commonly used (but potentially mis-understood) Index of Multiple Deprivation.

We will discuss how classifications and deprivation indexes can be used in both individual and area based studies.

Learning outcomes

- Knowledge of classification, the pros and cons
- Practical experience of carrying out k-means classification
- Data reduction with relevance to an index of deprivation
- Awareness of how area typologies can be used in research
- Access to example literature which develops and / or uses classifications
- Making a gentle transition from point and click to the use of SPSS syntax