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Open Statistical Data: Potential and Challenges

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Abstract. Opening up data is a political priority worldwide. Linked open data is considered as the most mature technology for publishing and reusing open data. A large number of open data is numerical and actually concerns statistics. In the literature, statistical data have been heavily studied using the data cube model. Recently, ICT tools have emerged aiming to exploit linked open data technologies for providing advanced visualizations and analytics of open statistical data residing in geographically dispersed open data portals. The aim of this panel is to discuss the potential and challenges of open statistical data.

Keywords. Open Data, Open Statistical Data

1. Introduction

Opening up governmental data is a political priority across the globe. As a result, a large number of European public authorities have launched and maintain relevant portals. However, the potential of Open Government Data (OGD) has been unrealized to a large extent [1].

The difficulty in exploiting open data seems surprising if we consider the huge importance data have in modern societies. Indeed, during the last years, businesses, academia and government employ various data analytics methods on their own data with great success. For example, business intelligence methods capitalize on the data cube model for multidimensional data to help enterprises survive in the global economy.

Looking at the actual data, it is evident that a large part of OGD is of a statistical nature, meaning that they consist of numeric values that are highly structured [2]. For example, the vast majority of datasets published on the Open Data Portal of the European Commission are of statistical nature. These data are important because they

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have the potential for innovative uses, e.g. performing advanced data analytics and visualizations on top of combined data that were previously isolated.

Moreover, Linked Data has been introduced as a promising paradigm for opening up data because it facilitates data integration on the Web. In the case of statistical data, Linked Data has the potential to realize the vision of performing data analytics on top of related but previously isolated statistical data across the Web. A fundamental step towards this vision is the RDF Data Cube vocabulary. Although several practical solutions have been developed during the last years for creating and exploiting Linked Open Statistical Data [3], these solutions are mainly technology-driven and are not able to address the complexity and dynamics of public sector organizations and public-private collaboration with regards to (a) opening up statistical data and (b) co-producing data-driven public services.

2. Panel Objectives and Structure

This panel gathers a number of experts aiming to discuss the potential and challenges of Open Statistical Data. The panel consists of a mixture of academics, IT industry and practitioners covering in this way different perspectives and viewpoints.

The discussion will cover the following topics amongst others:

- What is Open Statistical Data?
- What are the similarities with and differences from Open Government Data?
- What are the advantages of Open Statistical Data?
- What are the challenges in adopting Open Statistical Data?
- What are the key characteristics of relevant good practices?

It is expected that the discussions will not be limited to the panel. Instead the floor will be also provided to the participants in order to ask questions, express opinions and contribute with their experiences and views.

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