

# Challenges of Access and Reuse Open Government's Statistical Public Data

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Public sector information in open government's website is usually available as statistical data in relational database or Excel. However, potential usages of diversified separate statistical data are quite limited if they cannot not be effectively integrated together. We address the research challenges of open statistical data integration from public sector in three perspectives: data mapping, data extraction, and data integration. First, each statistical data source in relational database or Excel is mapped into multi-dimensional semantic data cube in RDF(S). Then, we extract related sub-dimensional information from each RDF(S)-based semantic data cube for possible integration. Finally, we integrate these multiple sub-dimensional data cubes into a new semantic data cube to enact effective access and reuse. Implicit information embedded in each semantic data cube is discovered in a new semantic data cube through the semantic statistical data mapping, extraction, and integration processes. We have implemented an open government's statistical data integration platform and used empirical data from Taiwan open government websites to allow querying of a new semantic data cube.

**Keywords:** open government, open access, statistical data integration, semantic data cube