New and improved tools for spatial statistics

Spatial Statistical Data (PDS) project

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Objectives

• Increase the scope and accessibility of spatially referenced statistical information

  • Geostatistics Portal
    http://geo.stat.gov.pl

• Overhaul and new developments in the existing system launched in 2013
Project timeline

• **1.07.2018 - 31.10.2022**
  
  • extended due to the global pandemic

• The new version of the **Geostatistics Portal**
  
  • has been launched in April 2022
EU Financing

- “Spatial Statistical Data in the Information System of the State” Project (PDS)

- Implemented under the Operational Programme Digital Poland under the II Priority axis – “E-administration and open government” Measure 2.1. “High availability and quality of public e-services.”
Geostatistical Portal

- **Intuitive graphical interface**
  - prepared following the principles of user-oriented design
- Storing and sharing resources by users
- Analysis, including *microdata*
- Advanced geostatistical *exploration methods*
Services/functionalities

Desktop access to geostatistical data and analyses

Mobile access to geostatistical data and analyses

Exploratory geostatistical data analysis

Geostatistical modelling

Semi-automated user content enrichment
Desktop access to geostatistical data and analyses

System data / user data

Area of interest

Visualization methods

Presentation

Sharing

System repository
Modules available in the Geostatistics Portal

1. **Display ready data visualizations on maps**
   - Resource Catalog
   
   In the resource directory, you can easily search for available data by topic or developing institution. It is a set of ready-made visualizations, analyzes as well as statistical and inter-ministerial data assigned to a specific issue and to the institutions that developed them.

2. **Prepare a visualization based on GUS data**
   - Map portal – GUS data
   
   A tool for preparing your own visualization of statistical data on maps. You can define the method of cartographic visualization or the level of data aggregation yourself. You can prepare visualizations on the data provided by Public Statistics, including data from the Local Data Bank. You can print the results of your work, but it is not possible to save them in the Portal and return at a later date - to do this, go to the Map Studio.

3. **Prepare your own data visualization on the map**
   - Map portal – your data
   
   Here you will find a full set of tools that will allow you to prepare the visualization of your data on a map or to conduct advanced analysis on your own data or on GUS data. A login is required to use most tools.
Resource Catalog
predefined data visualizations

Display ready data visualizations on maps
Resource Catalog

In the resource directory, you can easily search for available data by topic or developing institution. It is a set of ready-made visualizations, analyzes as well as statistical and inter-ministerial data assigned to a specific issue and to the institutions that developed them.

OPEN

Statistics Poland
Map portal
Visualizations using StatPol data

Prepare a visualization based on GUS data

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OPEN
Map portal
Efficient presentation of cross-time series
Grids

- census results
- other point based statistics
- ETRS89-LAEA
- quad-tree division
- statistical confidentiality
Mobile access to geostatistical data and analyses

Access to analyses in the system repository

Spatial data layers and services

Location based popular statistics
The mobile application (available soon)
Map portal
Visualizations with your own data

Prepare your own data visualization on the map
Map portal – your data

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Prepare an analysis or analytical panel
Analysis studio

It allows you to create and save the configuration of the analytical panel by selecting and configuring the following components: new applications, diagrams and charts, tables, map legend (Login required)

Prepare your own data presentation
Map studio

Prepare your own visualization. A tool enabling the preparation and saving of a cartographic presentation of data by selecting visualization components such as base map, dynamic layers and available interactive tools. (Login required)

Prepare your own service
Composition studio

Prepare your own service. A tool that allows you to define the visualization of selected data and make the created visualization available using dynamic or static services (eg. WMS or WFS). (Login required)
Geocoding
Attach coordinates to your data

It enables the attachment of spatial information to the loaded tabular data set, based on the Search Server services, i.e. assigning a spatial location to text-described address points and assigning the geometry of the administrative division.
Resource manager
Store and share your data

Upload and manage your resources

A tool that allows you to view, search and manage your data and the data you have gained access to. It allows you to view the user’s own resources and share resources within the organization. (Login required)
Map studio
Prepare your own data presentation

Prepare your own visualization. A tool enabling the preparation and saving of a cartographic presentation of data by selecting visualization components such as: base map; dynamic layers; available interactive tools. (Login required)
Map studio
Prepare your own data presentation
Composition studio
Prepare your own service

Prepare your own service. A tool that allows you to define the symbolization of selected data and make the created visualization available using dynamic or tiled services (e.g., WMS or WMTS). (Login required)
Exploratory geostatistical data analysis

Data

Data processing

Data analysis

Visualisation

Dissemination
Methods of statistical and geostatistical data analysis

- Central tendency
- Dispersion
- Cluster analysis
- Spatial autocorrelation
- Taxonomic methods (e.g. Hellwig's synthetic indicator of development)
- Typologies (e.g. Webb's typology, location quotient)
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Data configuration diagram
Geostatistical modeling

Data processing

Selection and preparation of a predictive model

Model testing and validation

Visualisation

Dissemination
Models and interpolation methods

- Predictive modeling
  - (e.g. decision tree model, linear regression model, logistic regression model)
- Spatial regression models
- Spatial interpolation methods
Schema of the predictive model
Interactive search for information

Search parameters

Interactive search

Visualisation

*The service is also available via API*

Insert text

directly enter text or import a section of the document
Summary

• Both the literature review and measurement practice indicates
  • different ways of understanding and defining the term subjective poverty
    • this indicates a need to clarify terminology and develop a system of concepts related to the measurement of subjective poverty
  • low use of subjective data for poverty monitoring
    • at present, both at the national and international level, objective indicators play a dominant role in monitoring the phenomenon of poverty; the measurement of subjective poverty is generally limited to a minimum or omitted
  • lack of commonly agreed indicators of subjective poverty for international comparisons
Opinions of National Statistical Offices on the usefulness of undertaking further work on measuring subjective poverty at the international level

- Based on the results of a special questionnaire prepared on this issue

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<tr>
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<th>Against</th>
<th>No opinion</th>
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<td>5</td>
<td>10</td>
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<tr>
<td>Development of a list of indicators for international comparisons</td>
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<td>8</td>
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• We encourage you to visit the website
  • https://geo.stat.gov.pl
Thank you
for your attention!

stat.gov.pl
twitter.com/StatPoland