





Consiglio Nazionale delle Ricerche

The role of FOSSR in providing resources for Policy Design and Evaluation

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FOSSR

Fostering Open Science in Social Science Research Innovative tools and services to investigate economic and societal change









THE VALUE OF OPEN SCIENCE: DATA SHARING AND SOCIAL IMPACT

The concept of **'open science'** encompassing **knowledge sharing** within scientific communities and its interaction between science and society, holds a crucial role in the contemporary science, especially in the fields of Social Sciences and Humanities (SSH).

Within scientific endeavors, open sharing of knowledge, including **data and resources**, has the potential to enable the exploration of **new research questions**, drive **interdisciplinary collaboration** and foster the exploration of **innovative analytical tools**, thereby positively influencing research processes in general.

From a societal standpoint, it becomes important to ensure **research findings are accessible to policymakers**, thus amplifying the **impact of scientific work on decisions that affect citizens**. *E.g, Open data availability can be expoloited for socio-economic policies through collaborative utilization by researchers and the interest of policymakers*.









RESEARCH INFRASTRUCTURES AS KEY COMPONENT FOR THE DEVELOPMENT OF OPEN SCIENCE

A significant boost to the development of 'open science' comes from the **creation and enhancement of Research Infrastructures (RIs)**. The practice of 'open science,' facilitated by RIs, is realized through activities enabling researchers or interested parties to access data, tools and services.

What are RIs? A simple definition could be:

"RIs are sociotechnical platforms crucial for conducting high-quality research, often based on data of considerable size and complexity sourced from diverse origins".

The objective of RIs extends **beyond mere scientific data sharing**, encompassing the provision of **innovative tools and services** for research, fostering initiatives to **build communities**, and engaging **social and political actors** (public engagement).









FOSSR PROJECT INTEGRATES THE ITALIAN NODES OF 3 EUROPEAN RESEARCH INFRASTRUCTURES

FOSSR aims to create an **Italian Open Science Cloud for the Social Sciences**, a shared virtual environment designed to facilitate data access by integrating and strengthening national nodes of three European infrastructures in which CNR takes the lead for the Italian part: **CESSDA**, **SHARE and RISIS**.

FOSSR's objective is to promote the development of a social and research-friendly environment that simplifies **open and shared data access through innovative interfaces and services**. The project will integrate a wide set of data sources across **various themes related to economic and social sciences**, incorporating existing and new resources, tools, and services.

FOSSR aims for the effective implementation of open science concepts and practices within the social and economic sciences, intending to have both scientific and societal impacts.











THE THREE RESEARCH INFRASTRUCTURES INTEGRATED IN THE FOSSR PROJECT



Survey of Health, Ageing and Retirement in Europe 50+ in Europe



CESSDA ERIC Consortium of European Social Science Data Archives European Research Infrastructure Consortium, of which Italy joined in July 2021, which provides the scientific community with facilities, tools, datasets, and certified services to conduct research activities of excellence in the social sciences domain.

SHARE ERIC Survey of Health, Aging and Retirement in Europe European Research Infrastructure Consortium, an interdisciplinary and longitudinal survey on the economic, social, health and well-being conditions of the 50+ population in twenty-eight European countries (plus Israel).

RISIS Research Infrastructure for Research and Innovation (R&I) Policy Studies provides data and services to support the development of a new generation of analyzes and indicators for the study of Science, Technology and Innovation processes on the base of three main perspective: actors involved, topics addressed to understand the directionality of the R&I efforts, and geography of science and innovation.









INSIDE CESSDA-ERIC: DASSI – DATA ARCHIVE FOR SOCIAL SCIENCE IN ITALY

The CESSDA Data Catalogue hosts over 40,000 data collections from CESSDA's Service Providers, representing more than 20 European countries. It serves as a gateway for accessing and discovering **European social science data**.

Many datasets are available encompassing a variety of types: **quantitative, qualitative, or mixed-modes**, spanning cross-sectional or longitudinal studies, and ranging from recent to historical data.

DASSI, managed by UniBicocca and CNR, functions as the Italian service provider for CESSDA-ERIC, providing:

- data, tools, and services catering to social science research needs
- a platform for both depositing and utilizing research data for new studies.

It also supports a long-term data preservation and sharing, promoting for **data accessibility and reuse**.









SHARE-ERIC SURVEY OF HEALTH, AGEING AND RETIREMENT IN EUROPE

SHARE is a resource for studying **the effects of health, social, economic and environmental policies** over the life-course of European citizens and beyond. SHARE data collection is based waves of computer-assisted personal interviews (CAPI). Due to the outbreak of the COVID-19 in March 2020 all face-to-face interviews needed to be stopped and a telephone survey was conducted.

The SHARE interview comprises different thematic blocks or modules, covering topics such as **employment** and pensions, household income, and financial transfers.

In each participating country, a country team manages the national or regional data collection and ensure the **same methodological standards** in all SHARE countries.









RISIS focuses on **services and data for science and innovation studies**. It is developed by 18 partner including universities and research centers in Europe.

It provides access to **15 datasets for studying science and innovation**, **s**upporting the development of a new generation of analyses and indicators.

4 Italian nodes: VICO, CHEETAH, JOREP 2.0 and the new dataset EFIL.

EFIL -European dataset of public R&D funding instruments aims at enabling users to investigate public R&D funding in Europe at the level of project funding instruments and Research Funding Organizations (RFO), addressing questions related to **R&D policy design and policy implementation**.











FOSSR INNOVATIVE TOOLS: PROVIDING A POLICY LEARNING PLATFORM

An important target of the Project FOSSR involves creating **tools and services dedicated to data collection and analysis**.

FOSSR represents an extraordinary opportunity to broaden understanding and enhance the effectiveness of **data-driven socio-economic policy learning**. It aims to facilitate users' adoption of **advanced quantitative methods and innovative solutions for research** in the social sciences.

The realization of a **Policy Learning Platform (PLP)** will be based on recent advancements in **machine learning** to support **artificial intelligence decision algorithms**. It will be designed with an open-source approach and will be developed using three software tools: two open-source, Python and R, and one commercial, Stata.









TOWARDS A SOCIAL IMPACT OF SCIENCE

FOSSR intends for the PLP to be a resource for **bridging the gap between theoretical frameworks and practical implementation in the realm of data-driven policy learning**.

The development of this and other tools exemplifies how FOSSR can stand out as a reference point for research and policy learning. By integrating data from social sciences infrastructures, it seeks to empower researchers, professionals, and policymakers to **predict policy impacts** and **create scenarios across diverse social sectors**.

These sectors encompass, among others, aging, employment, innovation, education, and various realms pivotal for societal advancement.









FOSSR: NOT ONLY DATA AND SERVICES BUT ALSO ... TRAINING OPPORTUNITIES

FOSSR is committed to enhancing the skills of scholars and stakeholders in accessing, analyzing, managing, querying and interpreting data, and fostering reflective learning and interactions between researchers and societal actors, organizing/funding:

Online Training Courses

on specific topics related to data collection, managing and processing that can have the effect of encouraging researchers and interested audience to access the infrastructure data

Participatory Sessions

aimed at learning how the efforts of researchers can tackle the societal actors' need and the availability of infrastructure data can foster researchers' capabilities and produce social effects

Higher Education Programmes at universities

 ✓ a Second-level Master Programme in Social Data Science (SDS);

✓ PhD positions opened at various Italian universities;









THANK YOU!



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