



## SAMPLE DELIVERABLE 28

### FIFTH MINI-PROJECT PROGRESS REPORT

**Period: 1 April 2010 – 30 September 2010**

Grant agreement No:	SSH - CT - 2008 – 217565
Project Acronym:	SAMPLE
Project Full title:	Small Area Methods for Poverty and Living Conditions Estimates
Funding Scheme:	Collaborative Project - Small or medium scale focused research project
Deliverable n.	28
Deliverable name:	Fifth Mini-Project progress report
WP no.:	5
Lead beneficiary:	7
Nature:	Report
Dissemination level:	PU
Due delivery date from Annex I:	31/10/2010
Actual delivery date:	7/12/2010
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Document title:	Fifth Mini-Project Progress Report
Status:	Final
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### **WP 1: New indicators and models for inequality and poverty with attention to social exclusion, vulnerability and deprivation**

In these months, CRIDIRE - Siena University continued its activity developing especially Task 1.3 of the project: *Pooled estimates of indicators*. It focused on improving the sampling precision of indicators of poverty and social exclusion for sub-national regions in EU countries, in particular through the cumulation of data over rounds of regularly repeated national surveys. The reference data for this purpose are based on EU Statistics on Income and Living Conditions (EU-SILC). A standard integrated design has been adopted by nearly all EU countries. It involves a rotational panel in which a new sample of households and persons is introduced each year to replace one quarter of the existing sample. Persons enumerated in each new sample are followed-up in the survey for four years. The design yields each year a cross-sectional sample, as well as longitudinal samples of various durations. Two types of measures can be so constructed at the regional level by aggregating information on individual elementary units: average measures such as totals, means, rates and proportions constructed by aggregating or averaging individual values; and distributional measures, such as measures of variation or dispersion among households and persons in the region.

Estimation of variance and design effect with Jackknife Repeated Replication (JRR) method have been calculated for the cross-sectional 2006 and 2005 Poland datasets. Results showed an improvement in sampling precision thanks to the proposed method.

In this period, CRIDIRE worked also at the realization of the final report concerning Multidimensional and fuzzy poverty indicators.

On the other hand, the SGH team devoted the last period to the comparison of the incidence and the depth of monetary and non-monetary poverty (deprivation) in Poland and in Italy by regions in 2008. Moreover, the regions were classified at the first stage into groups of similar structure of fuzzy incidence indicators and at the second one into groups of similar structure of fuzzy depth indicators. The study employed the developed methodology based on fuzzy measures. Estimation for standard errors was based on a re-sampling approach (it was used a bootstrap method).

### **WP 2: Small area estimation of poverty and inequality indicators**

In this period the partners working in WP” (UNIPI-DSMAE, Southampton, UC3M and UMH) have focused their activities in completing the following deliverables: D12 Final small area estimation developments, D16 Simulation results, and D17 pilot applications. Deliverables D12 and D16 were finished by the end of May 31th, 2010. Deliverable D17 was finished by November 2010. The partners in this work packages has also participated in several statistical conferences where they have presented some of the research results and achieved developments. The participations in the 45th Scientific Meeting of the Italian Statistical Society (June 16\_18, 2010), in the XXXII Conference of the Spanish Statistical and Operations Research Society (September 14-17, 2010), in the GfKI - CLADAG (September 8-10, 2010), in the 5th International Conference on Soft Methods in Probability and Statistics (September 20 – October 1, 2010) and in the 2nd Forum on Inequalities (October 4-6, 2010) are remarkable.

### **WP3: Integration of EU-SILC data with administrative data**

In this period UROPS acquired an other important **database**: the Revenue Agency Organization database (in the Department of Finance) in addition to the IDOL database (about labour market) and the MIROD database (Caritas database), completing the collection of databases.

After around 16 months of contacts and official requests to the Revenue Agency, UROPS obtained all the data. It has been a difficult process with the involvement also of the Authority for the protection of Privacy. The Revenue Agency Organization database contains individual income tax returns of people resident in the province of Pisa in 2008.

About the MIROD database UROPS has formalized an agreement with the 3 local Caritas Centers for their involvement in the construction of the Observation System to monitor poverty, vulnerability and social exclusion.

Concerning the tasks about poverty indicators, UROPS implemented the participation to the Regional Network of Social Observatories, discussing and beginning to collect health indicators. More of these indicators have a connection with the phenomena of poverty and social exclusion.

UROPS also concluded the survey on local stakeholders to achieve their point of view on the relevance of poverty indicators and on the perception of the poverty situation in their territory through an on-line survey and the Delphi Method.

The most important results are:

- the activation of an important **local network** of associations, public administrations, parishes, counselling centres that are involved in action against poverty;
- the creation of a **mailing list** of more 252 stakeholders that want to share a web space, documents and actions against poverty.

Finally, an important result of this period is the involvement of our local politicians in the Sample activities.

#### **WP4: Standardisation and Application Development – Software for Living Conditions Estimates**

During the fifth semester of our work as development team of WP4, Simurg focused mainly on:

- Releasing a preliminary beta release of the SAMPLE software application;
- Finalizing the R engine implementation inside the CMS platform;
- Designing the indicators' database.

#### **SAMPLE application beta release**

We have built the first alpha release of the SAMPLE application using the Elgg Framework, as planned, publishing it on a development server for testing purposes. Despite the extensive preliminary work, it was only after the alpha was out that we found Elgg lacked the flexibility and the ease of use we needed for our tool.

The source code and customizations have been then ported to the next platform on our short list: the beta version of the software application has been built on top of open source Drupal platform (currently we are using version 6.17, with a few contributed modules - Activity, Guestbook, Messaging, Notifications, Organic Groups, TinyMCE, User Relationships, Userloginbar - and a few custom modules tightly related to SAMPLE).

Drupal, often described as a "content management system" (CMS), is also a "content management framework" (CMF). In other words, unlike a typical CMS, it is geared more towards configurability and customization. It is very flexible, widely used, and its large user base made it a better choice than Elgg for the foundation of our application.

#### **R engine implementation**

To sum it up, the #1 reason for this technology change is that Drupal, while having an extensive set of tools for social networking, allows for more extensive customizations and a better *implementation of the R language engine*.

The R engine has been implemented as a Drupal module; then a beta version of the software application has been published on the project server (<http://lab.sample-project.eu>), with a graphic template that has been submitted for approval to the stakeholders.

### **Indicators' database design**

During these months Simurg has agreed upon the database structure, and built the actual repository to host.

The SAMPLE application will use two kinds of datasets:

- EUSILC data (with raw indicators coming from ISTAT, and processed by our R engine by leveraging R routines created by other WPs);
- social and health planning data (calculated without R engine via php code).

Both sets of calculated indicators will be saved into our repository, and will be used as a source for visualizations.

### **WP5: Management**

During the last period, the DSMAE Coordination Team has been engaged with the ordinary management of project activities (monitoring of the RTD and Dissemination activities) and some extraordinary activity for the financial management.

*General and specific management:*

- During this period, the Coordinator delivered the following **Deliverables**: D13 (13/04/2010), D12\_16 (08/06/2010), D27 (24/06/2010), D10 (26/07/2010), D15 (28/07/2010), D11 Summary (28/07/2010). The Coordinator asked to the Project Officer to postpone D11. The Coordinator took care of the contents and linguistic revision of all deliverables
- The Coordinator team worked to define the **calendar of the dissemination events** and of the project meetings in collaboration with the Province of Pisa: the Siena meeting in October 2010; the participation to the NTTs in February 2011; the final local event with stakeholders in June 2011 (see WP6 activities).
- The DSMAE Coordination Team organized and/or attended the following **WP's meetings**: three WP3-4 meetings in Pisa (partners involved: PP and SR); three WP5-6 meetings in Pisa with the WP leader PP-PC.

*Financial management:*

- The Coordinator provided **to transfer the Interim Payment** to three partners, which already had spent the pre-financing sum (after UMH, UC3M, CRIDIRE, in this semester, WSE –payment on the 13/07/2010- and SR – payment on the 05/07/2010-).
- The DSMAE **monitored the overall budget** and finalized the proposal for the **re-allocation of budget** for management, after the decision of the Steering Committee in Warsaw meeting (24/03/2010);
- The Coordinator organized an **Extraordinary Steering Committee** by tele-conference on the 7<sup>th</sup> June, in order to discuss with the Consortium the issues of the re-allocation of budget. the minutes have been sent by email to the P.O. on the 15/07/2010; the details of the agreement for the re-allocation between the partners was defined on the 15/07/2010 ; the Coordinator sent the email to the P.O. to ask his judgement about the re-allocation on the 21<sup>st</sup> July 2010.

### **WP6: Dissemination**

The Coordinator carried out the following tasks for the SAMPLE dissemination activities:

- updating and improvement of the project's web-site, in cooperation with PP;
- organization, in cooperation with PP, of the SAMPLE conference and meeting during the "Forum on Inequality" organized by the Faculty of Economics "Richard Goodwin" of Siena;
- Organisation of the Sample Local Event: cooperation with PP for the preparation of the draft program and budget.

The MGT Support Team (PP-PC) in these months implemented the following dissemination activities:

a) Website management and updating:

- publishing all the available documents presented in Warsaw Meeting;
- publishing all SAMPLE deliverables;
- publishing information about the Sample Meeting in Siena;
- Acquiring the authorisation to add the “European Year for Combating Poverty and Social Exclusion” logo on the Siena meeting;
- News updating.

b) Support to the University of Siena for the organization of Sample Meeting especially referring to dissemination activities;

c) Involvement of all partners in a discussion about the content and the format of Sample publications. Proposal of two typologies of publications: online publications and specialized publications.

d) Support UROPS in the developing of the social network of poverty stakeholders;

e) Organisation of the Sample Local Event: cooperation with the Coordinator for the preparation of the draft program and budget.

In this period, the SAMPLE partners attended and/or participated with papers to the following events of dissemination of the SAMPLE research activity and results:

Giusti C., Marchetti S., Pratesi M. (2010) A semiparametric Fay-Harriot model for small area estimation of welfare indicator, Atti del Q2010 European Conference on Quality in Official Statistics–Helsinki 4-6 May 2010

Pratesi Monica, Marchetti Stefano, Giusti Caterina, Salvati Nicola (2010). “Spatial Models in Small Area Estimation: an M-quantile Approach”. Atti del CLADAG 2010, 8-10 September 2010, Firenze.

Giusti Caterina, Marchetti Stefano, Monica Pratesi, Salvati Nicola (2010). “A nonparametric Fay-Herriot model for small area estimation of welfare indicators”. Atti delle XLV Riunione Scientifica della Società Italiana di Statistica, 16-18 June 2010, Padova.

Fabrizi Enrico, Salvati Nicola, Tzavidis Nikos, Monica Pratesi, (2010). “Design consistent small area estimators based on M-quantile regression”. Atti delle XLV Riunione Scientifica della Società Italiana di Statistica, 16-18 Giugno 2010, Padova.

Professor Verma (CRIDIRE) has taken part in the “45<sup>th</sup> Scientific Meeting of the Italian Statistical Society” (Padua, 16-18 June 2010) where he has showed the paper shared with Francesca Gagliardi and Caterina Ferretti “Cumulation of poverty measures to meet new policy needs”.