

**Francesca Gagliardi**  
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**Profile:** born on 25th of June 1978. Graduated cum laude in Statistics and Economics at the University of Siena in 2002, obtained her PhD degree in Applied Statistics at the University of Florence in 2006. From 2004 till 2006 has been assistant for statistic courses at the University of Florence and Pisa, and lecturer at Polimoda in Florence. She has been collaborating with the Department of Quantitative Methods in Siena on the survey about Tuscan households' living conditions; she has been deeply involved on the construction of the questionnaire and on the pilot survey. Up to January 2012 she has been junior researcher at the Quantitative Methods Department in Siena. Research field of interest: EU-SILC survey, alternative methods for variance estimations, data comparability, comparability on income reporting, SAS programs implementation for variance estimation of sub-populations. From July 2006 till date she has been involved in several research project: 'EU-SILC (Community statistics on income and living conditions): advanced estimation methods', 'EU-SILC (Community statistics on income and living condition): methodological studies to estimate the impact on comparability of the national methods used', 'Methodological studies and services for Income and Living conditions (EU-SILC)', 'Small Area methods for poverty and living condition estimates'.

She has good statistical and computing skills, and is an expert in SAS. Scientific Societies Memberships: SIS (Societa Italiana di Statistica).

## Education

- **PhD in Applied Statistics** (February 2006) at University of Florence, with a dissertation on "Undeclared work in Arezzo's area: statistical methods and empirical analysis" under the supervision of Prof. Achille Lemmi and Doct. Fabrizio Cipollini.
- **Laurea Maxima Cum Laude** in Statistical and Economic Sciences (4 June 2002) at University of Siena, with a dissertation on "Tuscan households living conditions survey: the questionnaire", under the supervision of Prof. Achille Lemmi and Prof. Giulio Ghellini.
- **Maturità** in Scientific studies (1997) at the Liceo Scientifico "G. Galilei" of Siena.

## Computer skills

- Statistical packages and programs: SAS, EViews.
- Operative Systems: Windows XP, MS Dos.
- Microsoft Office: Excel, Word, PowerPoint, Access, Publisher.
- Other: Internet Navigators, Adobe Acrobat.

## Languages

Italian, mother tongue.  
English, fluent.  
French, elementary.

**Employment**

- October 2006 – January 2012, Junior researcher at Department of Quantitative Methods, University of Siena
- August 2006 – October 2006, Research consultant at Department of Quantitative Methods, University of Siena. Main research field: alternative methods for variance estimation in EU-SILC.
- September 2002 – December 2002 Research assistant Department of Quantitative Methods, University of Siena for the project: Tuscany Households living conditions survey.
- March 2002- June 2002 IRPPT, Interviewer for the survey Tuscany Households living conditions.

**Teaching experiences**

- II SAS per l'analisi di dati provenienti da indagini campionarie, lecturer.
- Statistica Economica I, teaching assistant of prof. Lemmi, Facoltà di Economia, Università di Siena
- Statistica Economica II, teaching assistant of prof. Lemmi, Facoltà di Economia, Università di Siena
- Statistica Economica, teaching assistant of prof. Lemmi, Facoltà di Economia, Università di Siena
- Statistic for business decision making, teaching assistant of prof. Lemmi, Facoltà di Economia, Università di Siena
- Statistica Sociale, teaching assistant of prof. Ghellini, Facoltà di Economia, Università di Siena; exercises with Excel.
- Statistica 2, teaching assistant of prof. Greco, Facoltà di Economia, Università di Siena; exercises with SAS.
- SAS lessons for the Siena Summer School on Household panel surveys in collaboration with Medstat-Euro Med Statistical Cooperation.
- Lecturer in Statistics at Polimoda, Firenze.
- Statistica, teaching assistant at Università di Pisa;
- Statistica, teaching assistant at Università di Firenze.

**Publications**

- 1) Salvucci V., Betti G., Gagliardi F. (2012) Multidimensional and fuzzy measures of poverty and inequality at national and regional level in Mozambique. Working Paper n°649 Department of Economics and statistics.
- 2) Verma V., Gagliardi F., Ferretti C. (2013) Cumulation of poverty measures to meet new policy needs, in Advances in Theoretical and Applied Statistics. Torelli, Nicola; Pesarin, Fortunato; Bar-Hen, Avner (Eds.) 2013, XIX, Springer.
- 3) Gianni Betti, Francesca Gagliardi, Achille Lemmi, and Vijay Verma (2012), Subnational indicators of poverty and deprivation in Europe: methodology and applications Cambridge Journal of Regions, Economics and Society, 5(1), pp. 129-147
- 4) Verma V., Gagliardi F. (2010), Surveying child labour through households: sampling issues and strategies. Statistics in Transition, 11(3).

- 5) Verma, V., Betti, G. and Gagliardi, F. (2010), An assessment of survey errors in EU-SILC, Eurostat Methodologies and Working Papers, Luxembourg.
- 6) Verma, V., Betti, G. and Gagliardi, F. (2010), Robustness of some EU-SILC based indicators at regional level, Eurostat Methodologies and Working Papers, Eurostat, Luxembourg.
- 7) Verma V., Gagliardi, F. (2011), Data cumulation in repeated surveys. Invited Paper, ITACOSMI 2nd Italian Conference on Survey Methodology, Pisa.
- 8) Gagliardi et al. (2010). Software for the pooled estimators. Under the project Small Area Methods for Poverty and Living Conditions Estimates.
- 9) Gagliardi et al. (2010): Pooled estimates of indicators. Under the project Small Area Methods for Poverty and Living Conditions Estimates.
- 10) Gagliardi et al. (2010). Multidimensional and fuzzy indicators developments. Under the project Small Area Methods for Poverty and Living Conditions Estimates.
- 11) Betti G., Ferretti C., Gagliardi F., Lemmi A., Verma V. (2009). Proposal for new multidimensional and fuzzy measures of poverty and inequality at national and regional level, DMQ Working 83/09, University of Siena.
- 12) Verma V., Gagliardi F., Ferretti C. (2010), Cumulation of poverty measures to meet new policy needs. Presented at SIS, Padova (2010).
- 13) Neri L., Gagliardi F., Ciampalini G., Verma V., Betti G. (2009). Outliers at upper end of income distribution (EU-SILC 2007). DMQ Working Paper 86/09, University of Siena
- 14) Verma V., Gagliardi F., Ferretti C. (2009). On pooling of data and measures. Invited Paper, ITACOSMI9 1st Italian Conference on Survey Methodology, Siena.
- 15) Verma V., Gagliardi F., Ferretti C. (2009). On pooling of data and measures. DMQ Working Paper 84/09, University of Siena
- 16) Ciampalini G., Gagliardi F., Verma V. (2008). Methodology of European labour force surveys: (1) Scope and sample size. DMQ Working Paper 75/08, University of Siena.
- 17) Gagliardi F., Verma V., Ciampalini G., (2009). Methodology of European labour force surveys: (2) Sample design and implementation. DMQ Working 79/09, University of Siena.
- 18) Verma V., Gagliardi F., Ciampalini G. (2009). Methodology of European labour force surveys: (3) Sample rotation patterns. DMQ Working 80/09, University of Siena.
- 19) Betti G., Gagliardi F., Nandi T. (2007), Jack-knife variance estimation of differences and averages of poverty measures, Working Paper n. 68, Dipartimento di Metodi Quantitativi, Università di Siena.
- 20) Gagliardi F., Nandi T., Verma V., (2006) Variance estimation of longitudinal measures of poverty, Working Paper n. 64, Dipartimento di Metodi Quantitativi, Università di Siena.
- 21) Il lavoro sommerso in provincia di Arezzo: stima delle ULA mediante un metodo misto, Working Paper n°61, June 2006, Dipartimento Metodi Quantitativi di Siena, Università degli Studi di Siena.
- 22) Il lavoro sommerso in provincia di Arezzo: metodi statistici ed analisi empiriche, Tesi di dottorato, dipartimento di Statistica G.Parenti, Università degli Studi di Firenze.
- 23) Gianni Betti, Francesca Gagliardi, Giulio Ghellini, Achille Lemmi, Laura Neri (Univ. di Siena), Nicola Scilone (Iper): *L'indagine sulle Condizioni di Vita in Toscana: metodi e primi risultati*. Presentato a : Dinamiche e persistenze nel mercato del lavoro italiano ed

effetti di politiche (basi di dati, misura e analisi). Co-finanziamento MIUR 2001. Padova, 13--14 Gennaio 2003

24) *Rapporto di ricerca*, Progetto per ricerca-azione a supporto dell'attività di orientamento e formazione professionale e per favorire la lotta al lavoro sommerso, Provincia Arezzo, 2005

*Reports produced under Eurostat's projects:*

- 25) Variance estimation of longitudinal measures of poverty.
- 26) Alternative variance estimation procedures (1) Application to cross-sectional measures.
- 27) Country-specific assessment of income reporting in EU-SILC 2004.
- 28) Comparative assessment of income reporting in EU-SILC 2004.
- 29) A draft questionnaire on income in EU-SILC.
- 30) An examination of outliers at upper end of income distribution. Report to Eurostat.
- 31) Extension of JRR method for estimating variance and design effects of net changes and averages in poverty and inequality measures.
- 32) Using "JRR weights" to facilitate variance estimation given limited information on sample structure in EU-SILC UDB files.
- 33) 'Collapsing' of strata and PSUs to define more suitable and efficient computational units for variance estimation: a technical note.
- 34) SAS programs and documentation for JRR variance estimation. Application to longitudinal at-risk-of-poverty rates. It covers computation of standard errors and design effects of longitudinal poverty rates defined for a 'balance panel' in EU-SILC.
- 35) SAS programs and documentation for JRR variance estimation. Measures of net changes and averages of poverty and inequality indicators. It covers computation of sampling errors of net changes and averages over cross-sections for mean equivalised income, poverty rate, Gini coefficient, and share ratio S80/S20.
- 36) An examination of outliers at upper end of income distribution (EU-SILC 2005).
- 37) Reporting of self-employment income (EU-SILC 2005).
- 38) Country-specific assessment of income reporting in EU-SILC 2005.
- 39) A country-specific draft questionnaires on income reporting in EU-SILC 2005.
- 40) Comparative assessment of income reporting in EU-SILC 2005
- 41) Required tables on sampling errors in EU-SILC Final Quality Report (FQR).
- 42) SAS programs for variance estimation of the measures required for Final Quality Report.
- 43) Standard errors for the statistics included in Final Quality Report. Illustrations for Austria, Denmark, Iceland and Sweden. 03(1). Full cross-sectional sample for 2006.
- 44) Standard errors for the statistics included in Final Quality Report. Illustrations for Austria, Denmark, Iceland and Sweden. Longitudinal sample 2004-2006, panels of 2 and 3 year duration.
- 45) SAS programs for variance estimation of the measures required for Intermediate Quality Report.
- 46) Standard errors for the statistics included in Intermediate Quality Report. Illustrations for Austria, Denmark, Iceland and Sweden. Source: cross-sectional sample for 2007.
- 47) The 'Creation structure for JRR' Program.

- 48) Contribution to the section on Sampling Errors in the Intermediate Comparative Quality Report, 2007
- 49) Contribution to the section on Sampling Errors in the Final Comparative Quality Report, 2006

- 50) Variance estimation procedures and programs for EU-SILC
- 51) Clarification and some corrections to the tables included in comparative intermediate (2007) and final (2006) quality reports
- 52) Clarification and guidelines on the sample structure variables required for sampling error computations
- 53) Siena variance estimation programs for EU-SILC: updated "Version 2009.09" + SAS Program Provided
- 54) Quality Reporting for EU-SILC: Evaluation and Recommendations
- 55) A scientific paper on non-sampling errors in EU-SILC
- 56) SAS Programs for tables on sampling and non sampling errors in the Comparative Intermediate and Final Quality Reports. + SAS Program Provided

Siena, 04/03/2013

