

Curriculum vitae of Valeria Caviezel

Personal details

Name: Valeria Caviezel;

Birth: 9 august 1962;

Nationality: Italian;

Civil Status: unmarried;

Languages: Italian, French, English, Spanish;

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Current position

Since February 2006, I am Assistant Professor in Statistics at the Department of Economics of the University of Bergamo (Italy).

Since the a.y. 2020/21, I'm member of the Commissione Paritetica Docenti-Studenti of the Department Economics of the University of Bergamo (Italy).

Since the a.y. 2015/16 to a.y. 2019/20, I'm member of the Commissione Paritetica Docenti-Studenti of the Department of Management, Economics and Quantitative Methods of the University of Bergamo (Italy).

Since the a.y. 2018/19, I'm coordinator of the Commissione Revisione Prova Finale Lauree Triennali of the Department of Management, Economics and Quantitative Methods of the University of Bergamo (Italy).

Collaborations with foreign universities

- From January 23th to February 19th, 2012, Visiting professor at Université Lumière Lyon 2 - Lyon, MINERVE Program, Teacher of "L'Italia descritta attraverso le principale statistiche socio-economiche".
- From February 6th to March 6th, 2011, Visiting professor at Université Lumière Lyon 2 - Lyon, MINERVE Program, Teacher of "L'Italia descritta attraverso le principale statistiche socio-economiche".
- A.A. 2008/09, collaboration with prof. Mounir Mesbah at "Laboratoire de Statistique Théorique et Appliquée", Université "Pierre et Marie Curie", Sorbonne Université, Paris.

Education

- 1990-1993: Master in Economics and Statistics Sciences at Université Catholique de Louvain-la-Neuve (Belgique). Master Thesis in Econometrics.
- 1985-1990: Degree in Economics Sciences at University of Milan. Degree thesis in Econometrics.

Participation to Schools

- February 27th – 29th, 2008: “Multivariate statistical analysis with R” – Università “La Sapienza”, Roma.
- June 19th – 22th, 2007: “The Rasch model applied: developing fundamental measurement for the human sciences”, a course with professor Trevor G. Bond and professor Kendon J. Conrad – “NOVAUNIVERSITAS” Interuniversity Consortium, Milano.
- October 16th – 20th, 2006: “Methods and statistical models for evaluation of educational process” – Società Italiana di Statistica, Firenze.

Teaching Experiences

- Teacher of the course “Statistics”, for the Engineering Program, University of Bergamo, a.y. 2021/22.
- Teacher of the course “Statistics”, for the Economics Program, University of Bergamo, a.y. 2021/22.
- Teacher of the course “Statistics”, for the Business Administration and Management Program, University of Bergamo, since a.y. 2001/02 to a.y. 2020/21.
- Teacher of the course “Statistics”, for the Economics Program, University of Bergamo, a.y. 2018/19.
- Teacher of the course “Statistics with Excel”, for the Master in Human Rights and Ethics of International Cooperation, University of Bergamo, since a.y. 2015/16.
- Teacher of the course “Probability and Statistics”, for teacher education, University of Bergamo, a.y. 2012/13.
- Teacher of the course “Statistics for financial markets”, University of Bergamo, a.y. 2011/12.
- Teacher of the course “Multivariate Analysis” for PhD “Economics and Industrial Organization”, University of Bergamo, a.y. 2008/09.
- Teacher of the course “Statistics and Probability” for the PhD “Computational Methods for Economics and Finance”, University of Bergamo, from a.y. 2008/09 to a.y. 2013/14.

- Teacher of the course “Statistics and Probability”, Corsi speciali abilitanti Silsis, section of Bergamo and Brescia, a.y. 2006/2007.
- Teacher of the course “Excel for Statistics and Economics”, Faculty of Economics, University of Bergamo, a.y. 2006/07.
- Teacher of the course “Statistics and Probability” for master in Financial Methods, University of Bergamo, a.y. 2004/05 and 2005/06.
- Tutor of the course “Statistics and Probability” for Computer Sciences, Catholic University of Brescia, a.y. 2002/03 and 2004/05.
- Teacher of the course “Statistical Quality Control”, Catholic University of Brescia, a.y. 2003/04.

Participation to Meetings and Conferences with Proceeding

- June 2th – 5th 2020 – 6^o International Conference on Higher Education Advanced – Universitat Politècnica de Valencia.
Talk (virtual presentation): Caviezel V., Falzoni A.M., Galizzi, L. “Motivations and Concerns of outgoing Erasmus students”.
In “HEAd’20” eds. Domenech, J., Merello, J., de la Poza, E., Pena-Ortiz, R.; Universitat Politècnica de Valencia Ed., pag. 1173-1180.
- June 20th – 22th 2018 – XLIX SIS Meeting – Palermo.
Talk: Bacci S., Caviezel V., Falzoni A.M. “Benefits of the Erasmus mobility experience: a discrete latent variable analysis”.
In “Book of short papers” eds. Abbruzzo, A., Brentari, E., Chiodi, M., Piacentino, D.; Pearson Ed., pag. 993-998.
- October 8th – 10th 2015 – CLADAG 2015 – Cagliari.
Talk: Caviezel V., Falzoni A.M. “Why to study abroad? An example of clustering”.
In “Book of abstract” eds. Mola F., Conversano C., CUEC Ed., Cagliari, pag. 498-501.
- July 8th – 9th 2015 – International Conference IES 2015 – Bari.
Talk: Caviezel V., Falzoni A.M. “Evaluating the Erasmus experience: evidence from students of the university of Bergamo”. In “Book of abstract” eds. Crocetta C., d’Ovidio F., pag. 53.
- August 6th – 8th 2013 – International Conference on Computational and Engineering – Valencia.
Talk: Cassader M., Ortobelli Lozza S., Caviezel V. “Portfolio selection with options”. In “Recent Advances in Intelligent Control, Modeling & Computational Science” eds. Sendra S., Leba M., Ionica A., Kalovrektis K., Corbi O., pag. 89-94.
- June 20th – 22th 2012 – Meeting of the Italian Statistical Society – Rome.
Talk: Caviezel V., Ortobelli Lozza S., Bertoli Barsotti L., “Risk profile versus portfolio selection: a case study”.

<http://meetings.sis-statistica.org/index.php/sm/sm2012/paper/viewFile/2402/256>

- September 5th – 6th, 2008 – Statistical Modelling for University Evaluation: an International Overview – Università di Foggia.
Talk: Bacci S., Caviezel V., A methodological approach for university teaching evaluation: the multilevel Rasch model.
http://www3.unifg.it/ev_mnf/080908-09_unirank/dwn/Bacci_Caviezel.pdf
- June 25th – 27th, 2008 – XLIV Riunione Scientifica della Società Italiana di statistica – Università della Calabria.
Talk: Caviezel V., Weighted raw score and Rasch measurements.
- April 12th – 13th, 2007 – Valutazione e Customer Satisfaction per la Qualità dei Servizi – Roma.
Talk: Bertoli-Barsotti L., Biffignandi S., Caviezel V., Le competenze dei laureati mediante l'analisi di Rasch.

Participation to Meetings and Conferences without Proceeding

- January 20th – 21th 2022 – Lisbon Economics and Statistics of Education
Talk: Bacci S., Caviezel V., Falzoni A.M. "Benefits Of The Erasmus Mobility Experience: A Discrete Latent Variable Analysis"
https://lese-conference.org/assets/files/Program_LESE22_20jan_Final_With_Map.pdf
- December 13th 2018 – Workshop on Education Economics, Maastricht.
Talk: Caviezel V., Falzoni A.M., Vitali, S. "Who studies abroad and why?".
- March 30th – 31th 2017 – LEER Workshop on Education Economics, Leuven.
Talk: Caviezel V., Falzoni A.M., Vitali, S. "Who studies abroad and why?".
<http://feb.kuleuven.be/drc/LEER/map-ws-education-economics-2017/programme>
- January 26th – 27th 2017 – Fourth Lisbon Research Workshop Economics, Statistics and Econometrics of Education, Lisboa.
Poster: Caviezel V., Falzoni A.M., Vitali, S. "Who studies abroad and why?"
http://cemapre.iseg.ulisboa.pt/educonf/4e3/files/Final_Program.pdf
- February 25th – 27th 2015 – The Social Dimension in European Higher Education, Wien.
Talk: Caviezel V., Falzoni A.M. "Motivation and expectation for international student mobility: some evidence from Italy".
http://www.pl4sd.eu/images/Final_Conference_Materials/SD_conf15_book_of_abstracts.pdf
- December 4th – 6th, 2014 – EWGCMF, Euro Working Group for Commodities and Financial Modelling, Università di Milano Bicocca (Italy)
Talk: Caviezel, V., Ortobelli Lozza, S., Bertoli Barsotti, L. "Portfolio selection based on risk profile analysis".

- July 28th, 2014 – MOHSL, Mobility of High Skilled Labour – effects of studies abroad – Siegen (Germany)
Talk: Caviezel, V., Falzoni, A.M. “Studying abroad and students’ academic performance”.
- July 8th – 12th, 2013 – ICSP, International Conference on Stochastic Programming – Bergamo (Italy).
Talk: Caviezel, V., Ortobelli Lozza, S., Bertoli Barsotti, L., “Risk profile versus portfolio selection”.
<http://dinamico2.unibg.it/icsp2013/doc/ICSP2013BookOfAbstracts.pdf> pag. 70.
- July 8th – 12th, 2013 – ICSP, International Conference on Stochastic Programming – Bergamo (Italy).
Talk: Cassader, M., Ortobelli Lozza, S., Caviezel, V., “Portfolio selection with European call and put options”.
<http://dinamico2.unibg.it/icsp2013/doc/ICSP2013BookOfAbstracts.pdf> pag. 70.
- August 19th – 24th, 2012 – ISMP, 21st International Symposium on Mathematical Programming – Berlin.
Talk: Caviezel V., Ortobelli Lozza S., Tichy T., “On the impact of some distributional factors in large scale portfolio problems”.
<http://ismp2012.mathopt.org/show-abs?abs=1074>
- July 3th – 4th, 2011 – Patient Reported Outcomes and Quality of Life – Paris.
Talk: Cameletti M., Caviezel V., “The Cronbach–Mesbah Curve for assessing the unidimensionality on an item set: the R package MCM”.
<http://www.lsta.upmc.fr/mesbah/PROQOL/Abstracts/Cameletti.pdf>
- May 30th – June 1th, 2011 – Innovation and Society – Firenze.
Talk: Caviezel V., Ortobelli S., Bertoli-Barsotti L., “Risk profile using Rasch analysis: analysis with real data”.
<http://ies2011.ds.unifi.it/BookOfAbstractsIES2011.pdf>
- June 13th – 16th, 2010 – Probabilistic models for measurement in education, psychology, social science and health – Copenhagen.
Talk: Caviezel V., “A review of methods to test multidimensionality in the FIM scale”.
<https://conference.cbs.dk/index.php/rasch/Rasch2010/paper/view/667>
- June 8th – 12th, 2009 – International Rasch Measurement Workshop – Bled, Slovenia.
Talk: Caviezel V., Mesbah M., “A simple graphical device to assess dimensionality in a longitudinal setting. Application to the Functional Independence Measure”.
- October 11th – 13th, 2008 – AMAT 2008 Conference – Memphis – Tennessee, USA.
Talk: Caviezel V., Ortobelli-Lozza S., Rachev S., Semiparametric estimators for heavy tailed distributions.

Seminars

- On 15th May, 2012 – SUNOVA, Statistics with unobservable variables – Brescia (Italy).
Talk: Caviezel V., Ortobelli S., Bertoli-Barsotti L., “Selecting a generalised multidimensional Rasch model using the deviance statistic: a case study”.
- On 26th January, 2011 – Workshop on Rasch models: theory and applications – Brescia (Italy).
Talk: Caviezel V., Ortobelli S., Bertoli-Barsotti L., “Risk profile using Rasch analysis”. <http://www.unibs.it/on-line/dmq/Home/ConvegnoSeminari.html>
- On 15th April, 2011 – Talk “Les modèles de réponse à l’item et le modèle de Rasch: théorie et applications”, Université Lumière Lyon 2, Faculté de Anthropologie et de Sociologie, Lyon (France).
- On 3th May, 2010 – Miscellaneous in Latent Variables Models – Paris.
Talk: Cameletti M., Caviezel V. “Checking the unidimensionality in R using the Cronbach-Mesbah curve”.
http://www.lsta.upmc.fr/mesbah/Programme_030510.html

Softwares

Office, R, RUMM, Winsteps, MLwiN, IRT from SSI: BILOG-MG, MULTILOG, PARSCALE.

Participation to Research Projects

- 2020: International mobility: motivations and concerns of the students of the University of Bergamo.
- 2019: The role of the banking system in the process of internationalization of the companies. With Davide Castellani.
- 2018: Characteristics of the regularity and academic performance of students: a quantitative analysis. With Anna Maria Falzoni.
- 2017: The use of Internet on reduction of the export barriers of the SMEs. With Gianpaolo Baronchelli.
- 2016: The use of Internet on reduction of the export barriers of the SMEs. With Gianpaolo Baronchelli.
- 2015: Monitoring students’ mobility abroad. With Anna Maria Falzoni.
- 2015: International mobility and academic performance. A case study of University of Bergamo. With Anna Maria Falzoni.
- 2014: International mobility: motivations and expectations of the students of the University of Bergamo. With Anna Maria Falzoni.
- 2013: A study on the academic career.
- 2011-2012: PAADEL – Panel agroalimentare e demografico lombardo – Accordo quadro di collaborazione delle università con la regione Lombardia.
- 2011: Using Rasch analysis to assess the risk profile.
- 2010: Using Rasch analysis to validate the board evaluation models.
- 2009: Rasch analysis applied to FIM scale of disability.
- 2008: Multilevel Rasch model in evaluation context.

- 2007: Identifiability of conditional pairs estimation for parameters of polytomous Rasch model.
- 2007: Estimation of parameters of the Rasch model in case of missing data.
- 2006: Effects of block design on estimation of parameters of the Rasch model.

Societies

I am member of:

- SIS – Società Italiana di Statistica (Italian Statistical Society) – Roma.

Technical Reports

- Caviezel, V., Criscuolo, A., Criscuolo, I., Gnudi, A., Mattioli, L., Indagine sul livello delle conoscenze e abilità matematiche nel passaggio dal primo al secondo ciclo d'istruzione nella provincia di Bergamo – a.s. 2014/15. *Quaderni del Dipartimento di Scienze Aziendali, Economiche e Metodi Quantitativi, Education Series*, Università degli Studi di Bergamo, n.2, 2015.
- Avanzi, C., Caviezel, V., Criscuolo, A., Gnudi, A., Scarpaci, C., Indagine sul livello delle conoscenze e abilità matematiche nel passaggio dal primo al secondo ciclo d'istruzione nella provincia di Bergamo – aa.ss. 2012-13 e 2013-14. *Quaderni del Dipartimento di Scienze Aziendali, Economiche e Metodi Quantitativi, Serie MatNet*, Università degli Studi di Bergamo, n.1, 2014.
- Caviezel, V., Gnudi, A., Criscuolo, A., Scarpaci, C., Indagine sul livello delle conoscenze e abilità matematiche nel passaggio dal primo al secondo ciclo d'istruzione nella provincia di Bergamo – a.s. 2011/12, *Quaderni del Dipartimento di Matematica, Statistica, Informatica ed Applicazioni, Serie MatNet*, Università degli Studi di Bergamo, n.1, 2012.
- Caviezel, V., Criscuolo, A., Gnudi, A., Avanzi, C., Indagine sul livello delle conoscenze e abilità matematiche nel passaggio dal primo al secondo ciclo d'istruzione nella provincia di Bergamo – a.s. 2010/11, *Quaderni del Dipartimento di Matematica, Statistica, Informatica ed Applicazioni, Serie MatNet*, Università degli Studi di Bergamo, n.1, 2011.
- Caviezel, V., Criscuolo, A., Gnudi, A., Indagine sul livello delle conoscenze e abilità matematiche nel passaggio dal primo al secondo ciclo d'istruzione, *Quaderni del Dipartimento di Matematica, Statistica, Informatica ed Applicazioni, Serie MatNet*, Università degli Studi di Bergamo, n.1, 2010.
- Caviezel, V., Criscuolo, A., Gnudi, A., Indagine sul livello delle conoscenze e abilità matematiche nel passaggio dal primo al secondo ciclo d'istruzione nella provincia di Bergamo, *Quaderni del Dipartimento di Matematica, Statistica, Informatica ed Applicazioni, Serie MatNet*, Università degli Studi di Bergamo, n.1, 2009.

- Caviezel, V., Criscuolo, A., Gnudi, A., Indagine sul livello delle conoscenze e abilità matematiche nel passaggio fra scuola secondaria inferiore e superiore, *Quaderni del Dipartimento di Matematica, Statistica, Informatica ed Applicazioni, Serie MatNet*, Università degli Studi di Bergamo, n.1, 2008.
- Caviezel, V., Estimation for the Rasch models under a linkage structure: a case study, *Quaderni del Dipartimento di Matematica, Statistica, Informatica ed Applicazioni*, Università degli Studi di Bergamo, n.13, 2004.

Publications

- Caviezel, V., Falzoni, A.M., Vitali, S., Esperienza ERASMUS: motivazioni e timori prima della partenza, *Statistica & Società*, vol. 5(1-2), 2016.
- Caviezel, V., Falzoni, A.M., Vitali, S., L'esperienza ERASMUS: la valutazione degli studenti dell'Università di Bergamo, *Induzioni*, vol. 51(2), 2015, p. 97-108.
Abstract: The experience of credit mobility is a growing phenomenon among university students; indeed, so far, more than 3 million European students participated to the ERASMUS program. Recently, also the University of Bergamo aligned to the European guidelines, including the internationalization as one of the main aims for its future development. In order to investigate this issue, we conducted an online survey addressed to students of our university with credit mobility experiences. Therefore, we prepared a questionnaire divided in the following three main sections: i) Why to spend a period abroad; ii) During the period abroad; iii) Coming back to Bergamo. Our survey involves around 1300 students who had an experience abroad during the a.y. from 2008/09 to 2013/14. The aim of this paper is to analyze how students evaluate the experience abroad. We present the results through a mapping of the variables.
- Cassader, M., Caglio, S., Ortobelli, S., Caviezel, V., On the use of contingent claims in portfolio selection problems, *International Journal of Economics and Statistics*, vol. 2, 2014, p. 220-229.
Abstract: In this paper we propose some portfolio selection models with contingent claims to invest either in the fixed income market or in the stock option market. Firstly, we describe a possible solution of the portfolio choice problem in the fixed income market taking into account the default risk. With this purpose, we consider CDSs contracts to hedge the default risk of investments in bonds.
 Secondly, we use European options in two distinct portfolio problems: in a reward-risk portfolio framework, to hedge the underlying portfolio risk of some stock indexes. Since we use a large number of trading European option written on principal international stock indexes, we discuss how to reduce the dimensionality of the large-scale portfolio problems taking into account the liquidity of the options. Finally, we propose an ex post empirical analysis of different portfolio models with contingent claims.
- Cameletti, M., Caviezel, V., The R package CMC calculate the Cronbach-Mesbah Curve, *Annales de l'ISUP*, vol. 57(1-2), 2013, p. 59-68.

Abstract: This paper describes the R package CMC that calculates and plots the step-by-step Cronbach Mesbah curve. This is a simple but effective method, based on the Cronbach coefficient of reliability that can be used for checking the unidimensionality of a measurement scale adopted in a psychological or social science survey.

So far this graphical tool has been implemented only in an SAS macro called ANAQOL and therefore its dissemination has been somewhat limited to SAS users. The main aim of the CMC package is to extend the use of this method to a wider scientific community. To pursue this goal, the package is written in the open-source R language, which is rapidly evolving as the lingua franca of data analysis and statistical computing in many scientific fields. This paper illustrates the Cronbach-Mesbah curve via simulated datasets from the Rasch model.

- Caviezel, V., Gambirasi, S., Ortobelli Lozza, S., Risk profile using PCM and RSM, *Electronic Journal of Applied Statistical Analysis*, vol. 5(3), 2012, p. 328-333.

Abstract: In this paper we describe the investors' risk profile in order to meet the minimal requirements that Italian financial institutions must satisfy by law. The risk profile focus on three latent traits of the investor: knowledge of financial instruments, the investor's personal predisposition to risk/earn, and the investor's temporal horizon. We specifically identify a questionnaire whose items describe different characteristics of these three latent variables. In order to take into account the investor's preferences and his/her psychological attitude we propose analyzing the knowledge of financial instruments with two different sub-models of the polytomous Rasch model: the Partial Credit Model (PCM) and the Rating Scale Model (RSM). Finally, we discuss the possible uses of the proposed analysis in a financial context.

- Bettinelli, C., Caviezel, V., An exploration of board effectiveness in family business using a scaling approach, *Corporate Ownership and Control*, vol. 9(3), 2012, p. 27-42.

Abstract: This study addresses the call for the development of team effectiveness scales that take team context into account. It develops and validates a measurement scale for effectiveness in the specific context of boards of directors in family firms.

Results from a validation study based on 90 family businesses indicate that even if board task performance is associated with activities and roles that appear to represent differing views of effectiveness, they share a single, common line of inquiry. Moreover the study confirms that boards can be distinguished according to the degree to which they perceive themselves as more or less effective in performing certain roles. The scale demonstrates diagnostic properties that make it useful for practitioners as well as researchers.

- Cameletti, M., Caviezel, V., The Cronbach-Mesbah Curve for assessing the unidimensionality of an item set: the R package CMC, *Annales de l'ISUP*, vol. 55(2), 2011, p. 37-40.

Abstract: This contribution describes an R package, CMC, that calculates and plots the step-by-step Cronbach-Mesbah curve (CM curve) proposed in [1]. This is a simple but effective method, based on the Cronbach coefficient of

reliability, that can be used for checking the unidimensionality of a measurement scale adopted in a psychological or social science survey.

So far this graphical tool was implemented only in a SAS macro called ANAQOL [2] and therefore its diffusion was somewhat limited to SAS users. To extent the use of this method to a wider scientific community the package is written in the open-source R language.

- Caviezel, V., Bertoli Barsotti, L., Ortobelli Lozza, S., Measuring risk profile using a multidimensional Rasch analysis, *Journal of Applied Quantitative Methods*, vol. 6(4), 2011, p. 14-29.

Abstract: In this paper we propose an evaluation of investors' risk profiles such as to meet the minimal requirements that Italian financial institutions must satisfy by law (d. lgs. 164, 2007). Thus we investigate all aspects specific to so-called risk profiles: an investor's knowledge and his financial experience (concerning financial instruments and their use); financial objectives, a personal predisposition to risk /earn and the temporal horizon.

The methodology used in financial literature with regard to risk profiles is essentially based on simplistic statistical analyses that often fail to consider possible psychological aspects. In order to account for investor preferences and psychological attitudes, we suggest to use an item response theory model. We first assume a unidimensional model, belonging to the family of Rasch models and then, as an alternative approach, a Generalized Multidimensional Rasch model. In particular, the objective is to assess the value of a questionnaire whose items describe different characteristics of the main latent variable risk profile.

Under the assumption of a multidimensional measurement model, given the multivariate position of each investor with respect to identified latent traits we can represent his position with respect to possible investments proposed by a bank and we can identify different situations that respect the investor's risk profile and best characterize typical investor choices.

- Caviezel, V., Ortobelli-Lozza, S., On the investor's tendency to risk/earn on the stock market, *International Journal on GSTF Business Review*, vol. 1(2), 2011, p. 35 - 40.

Abstract: In this paper we analyze the investors' tendency to risk/earn on the stock market. In particular, we distinguish between two different phases of this analysis: we first value the *ex-post* wealth obtained by several optimal portfolio strategies in order to propose a questionnaire that covers all preferences held by some potential investors. Then we analyze the behavior of each investor on a homogeneous scale with respect to the latent variable (tendency to risk/earn) in order to characterize the optimal choice for each admissible investor. Finally, we comment the results of statistics obtained from this empirical analysis of the latent variable.

- Bacci, S., Caviezel, V., Multilevel IRT models for the university teaching evaluation. *Journal of Applied Statistics*, vol. 38(12), 2011, p. 2775 - 2791.

Abstract: In this paper a generalization of the two-parameter partial credit model (2PL-PCM) and of two special cases, the partial credit model (PCM) and the rating scale model (RSM), with a hierarchical data structure will be

presented. Having shown how the 2PL-PCM, as with other IRT models, may be read in terms of a Generalized Linear Mixed Model (GLMM) with two aggregation levels, a presentation will be given of an extension to the case of measuring the latent trait of individuals aggregated in groups. The use of this Multilevel IRT model will be illustrated via reference to the evaluation of university teaching by students following the courses. The aim is to generate a ranking of teaching on the basis of student satisfaction, so as to give teachers, and those responsible for organizing study courses, a background of information that takes the opinions of the direct target group for university teaching (that is, the students) into account, in the context of improving the teaching courses available.

- Cameletti, M. e Caviezel, V., R package "CMC - Cronbach-Mesbah Curve", <http://cran.r-project.org/web/packages/CMC/>, 2010.
- Caviezel, V., Ortobelli-Lozza, S., Rachev, S., Semiparametric estimators for heavy tailed distributions. *Journal of Concrete and Applicable Mathematics (JCAAM)*, n. 1(8), 2010, p. 150-164.

Abstract: In this paper we describe and apply estimating function theory to evaluate the parameters of parametric distributions uniquely defined by their characteristic functions. We first implement an estimating function model based on the first four moments of a parametric function of the underlying random variables. For instance we propose two parametric functions of the underlying random variables so as to obtain its first moments more easily by the simple knowledge of the characteristic function. Thus we consider the estimates that present the minimal asymptotic variance with respect to the parameter of the function. Then we propose an empirical analysis based on simulated stable Paretian distributions. Using simulated data of stable distributions we evaluate the forecasting power of the proposed methodology comparing it with the analogous maximum likelihood estimates. Moreover we show how to apply the same methodology to some well-known infinitely divisible distributions.

- Bertoli-Barsotti, L., Biffignandi, S., Caviezel, V., Le competenze dei laureati mediante l'analisi di Rasch, *Rivista di Economia e Statistica del Territorio*, n. 3, 2007, p. 109-135.

Abstract: In this study we apply the Rasch analysis to evaluate the competences of graduates in their job (required and effective competences). The data base comes from a study of employment performances of University of Bergamo graduates. In this paper, we study the latent variable which is constructed as a difference between the score attributed by the subject to the item on effectiveness and the score attributed to the importance of the corresponding item. Each item represents activities related to the job. We determined the optimal categorization of the difference variable, we eliminated the subjects with a lot of missing answers and we selected the good person factors. Starting from 26 items, we obtained a collection of 21 items which can be suggested as a test form for measuring the competences. This new collection is a good measurement instrument according to the Rasch analysis.

Book chapters

- Caviezel, V., Falzoni, A.M., Vitali, S., Motivations and Expectations of Students' Mobility Abroad: A Mapping Technique. In Mola, F., Conversano, C., Vichi, M. (eds.) *Classification, (Big) Data Analysis and Statistical Learning*, Springer Ed., 2018, p. 87-95.
- Caviezel, V., Le indagini sul settore agro-alimentare in Italia. In Biffignandi, S. (eds.) *// Panel agroalimentare e demografico lombardo (PAADEL)*, Franco Angeli Ed., Milano, 2012, p. 125-131.

Teaching Publications

- Cameletti, M., Caviezel, V., *STATISTICA: richiami teorici ed esercizi svolti*, ed. Giappichelli, Torino, 2013.
- Caviezel, V., Coin, D., *Esercizi per un corso di statistica*, ed. Giappichelli, Torino, 2004.

September 30th, 2020