I am an economist with a strong interest in data analysis and econometric issues. My research topics have been focused on issues related with i) Techniques for analysis and forecast of economic variables; ii) Development of models using time series techniques; iii) Effects of energy price shocks on economic variables; iii) Multivariate time series analysis at disaggregate level and iv) R programming, reproducible research and data visualization.

I have worked as an economic analyst at *Universidad Carlos III de Madrid* for 12 years. I was in charge on the development and the maintenance of the econometric models used for the analysis and forecast of many macroeconomic variables in the U.S., Euro area and some European countries including Spain and its regions. Beside using a variety of time series techniques, I also use disaggregate analysis of the variables, especially Bottom-Up procedures in hierarchical structures of consumption, production, etc.

I have worked with R language for four years. I have performance all my recent work with R code with the purpose of make it reproducible (knit R and Latex), or easy the visual presentations of the results through figures and tables, some of them in interactive way.

I am interesting in the work with *Joint Research Center* because its objectives deal with issues of my own professional and personal interests. First, I am entirely convinced about the importance, utility and enrichment of the transversally focus in the economic analysis, with the wide range of points of views from different professionals. I also found of interest the spatial work, that is, the inclusion of characteristics related with the geography and idiosyncrasy of the regions in the economic analysis. The more objective and efficient way to improve and integrate the key issues selected by professionals and the empirical work is through models. Due to the dynamic process originated by the feedback between the facts and the analytical tools, it is important to consider the work in a reproducible research environment, that is the easy use of computational tools that allow the change or addition of parameters in the analysis. The evaluation and validation of the results should be made according to the objective of analysis or forecasts.

I can put at the service of the Joint Research Center my commitment to development an econometrician work in an interdisciplinary focus and my knowledge in reproducible research, European economic variables, hierarchical analysis of these variables, the preparation of the workshops, handbooks, reports or presentation in order to discuss and improve the results of the investigation.

During my work activity, I was challenged with a lot of situation about the unexpected behavior of macroeconomic variables. The analysis of these series, demand a sketch of current issues that could have been related with this behavior: market and regulatory changes, monetary policy decisions, idiosyncratic characteristics especially of consumers, etc. Because the dynamic of variables is increasingly influenced by complex global relations, it is important to assess the likely pass-though or feed-back with key international economic variables. The next key step is the descriptive analysis. Fortunately, there are a lot of analytical tools for it (statistics, programming, etc.), but I prefer to work with R (I also use Matlab and excel) because it permits a flexible reproducible research. I have tried several forms to match the dynamics of macroeconomic variables to the key issues of the complex reality. The results give some highlights about the problem, although they must always be considered into the specific characteristics of the analysis. Debates and presentations with colleagues have been a valuable and enrichment exercise. I consider this method has allowed me to better understand the complex dynamic of most economic variables.

My professional skills include:

- Manage of a variety of data bases, especially from European Institutions

- R programming (reproducible research)

- Statistical techniques for time series analysis

- Interdisciplinary work

- Preparation the reports and presentations

- Use of other software as SCA, Matlab and Excel

I worked in the study and development of new models for the forecasts of macro-variables, reading academic papers, searching for data in different institutional sources, programming and development new codes and proceedings, writing reports and preparing presentations.

Institute for Prospective Technological Studies

Regional Economic Modelling

I am applying for the position available in the Institute for Prospective Technological Studies. I am about to finish my Ph.D. thesis in Applied Time Series Econometrics at the University of Salamanca, Spain.

I am an economist with a strong interest in data analysis and econometric issues. My research topics have been focused on issues related with i) Techniques for analysis and forecast of economic variables; ii) Development of models using time series techniques; iii) Effects of energy price shocks on economic variables; iii) Multivariate time series analysis at disaggregate level and iv) R programming, reproducible research and data visualization.

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I look forward to hearing from you at your earliest convenience.

Yours sincerely,

César Castro Rozo