

Review of “Regional Tax Effort in Spain”

I have finished reviewing the paper “Regional Tax Effort in Spain” and I think it studies a very relevant topic, with a novel empirical approach that finds interesting results for both the Fiscal Federalism literature and analysts of the Spanish regional financing system. My suggestion would be to publish the paper, although with some changes that I will summarize now:

- First of all, I would suggest the authors to better justify and emphasize the interest of applying their empirical approach to the Spanish regional governments, in order to make it more appealing for non-Spanish researchers.
- Regarding the second section of the paper (Review of the literature on tax effort), I find it a little bit confusing. I would suggest to re-write it in order to increase the clarity of the conceptual explanations, since under the current version it is easy to mix the fiscal capacity and fiscal effort concepts (the text jumps from one to the other along the text several times). This is particularly true for the explanation of the methodology proposed by Aigner et al (1977) in page number 5.
- More specifically, when the authors refer to Henry Frank’s index (page 3, last paragraph), they mention the concept of “fiscal pressure”. I would suggest to explain a little bit more both the index and the concept of fiscal pressure. The same applies for the relative tax effort indexes mentioned after the latter.
- In page 4, the authors say that “another disadvantage [of the Representative Revenue System] is that if the decentralized tax bases are not closely linked to regional income, resources may be transferred from low-income regions to rich ones through equalization grants”. I do not really understand this argument, since using the RRS is specifically intended to overcome the problems of using a macro indicator such as the level of income per capita.
- Page 7, first paragraph of section 3: authors state that the Spanish equalization system considers regions’ tax effort in order to allocate equalization payments. I do not agree with this statement, since what the Spanish equalization system considers is regional fiscal capacity (the amount of resources that would be collected by each region if no use of regulatory powers regarding tax rates, deductions, etc. was made).
- Page 8, second paragraph: I would suggest the authors to substitute the word “State” for “central government” or a similar expression. Although it is common to refer to the State within the Spanish context, the expression could be misleading for non-Spanish readers, since in most federal countries regional governments are referred to as “states”.
- Page 10, first paragraph: authors are considering all regional taxes, even in the case when regional governments do not have regulatory powers. I would suggest to further explain the interest of measuring the fiscal effort on those taxes for which sub-central governments do not have any margin of maneuver in order to increase or reduce collections.
- Page 11, second paragraph: the explanation of the variable TEND is not clear. What is the specification of this variable? The same applies for variable ACTIVISM1 in page 12.
- Page 13, second paragraph: I think that a deeper explanation of the use of DENSITY and POPGROWTH as explanatory variables of fiscal capacity is needed.
- Page 13, second paragraph: “the system sets the population at the level of the base year considered, obliging jurisdictions with faster demographic growth to make a

greater tax effort". This is true only for the period before 2009. After that year, transfers are calculated according to each year's adjusted population.

- Page 13, third paragraph: please, give further explanations of variable QMANAG.
- Page 13, fourth paragraph: variable CRISIS could have different outcomes depending on its specification. As the authors well know, in spite of the fact that 2008 was a crisis year, regional governments did not suffer from the fall of resources until 2010, when transfers were negatively adjusted by the central government. I would then suggest them to explain their specification of the variable to adequately evaluate the results.
- Page 14: the explanation of the role of inefficiency is not clear enough.
- Page 15: please, explain what λ , Υ and Θ mean and imply under the stochastic frontier model used to measure fiscal capacity and fiscal effort.
- Regarding the results of the estimations (page 15), I am not completely convinced about the authors' explanation of those regarding the Canary Islands: given their level of income, I think that those results could be due to the fact that VAT and excise taxes do not apply in their territory and are substituted by regional-unique indirect taxes collected by the regional government. Where those regional taxes considered in the estimations?
- Page 17, paragraph 2: please, rewrite this paragraph, since it is difficult to understand.
- Results suggest that richer and most populated territories are the ones with highest fiscal effort: could this be pointing to the fact that fiscal effort measures are sensitive to size?