

Diego d'Andria - Reply to Referee Report 1

Dear Referee,

thank you for your very interesting comments and remarks. The following points provide my views.

1) As you may have expected already, I have to disagree with the following remark:

"In my opinion, the paper builds on a misreading of Sørensen (2007): Contrary to the impression that a reader might get from the present paper, Sørensen himself points out that the possibility of tax evasion is an important argument against non-uniform tax rates. More specifically, Sørensen list five arguments against differential capital income taxation, of which two are related to tax evasion (transfer pricing and industry reclassification) and he concludes: "In summary, the practitioners' case against selective direct and indirect taxation remains strong" and "deviations (from uniform taxation) should be accepted only in those few cases where theory and evidence clearly indicate a high welfare cost of uniform taxation" (p. 403)."

First, a clarification about terminology seems mandatory. As the majority of literature, I use the term "tax evasion" to address illicit sheltering of taxable bases. Moving capitals abroad through "transfer pricing" or by other means is often a licit behavior. Therefore it is not generally classifiable as "evasion", but rather as a form of (licit) tax avoidance. See for example the OECD definition of transfer pricing (here: <http://browse.oecdbookshop.org/oecd/pdfs/browseit/2309111E.PDF>).

It is true that "arm's length" pricing rules may induce illicit tax evasion in the form of underreporting of intracorporate transactions. But outside of the US experience (and maybe of Canada and Mexico), we do not find an equal diffusion of such rules worldwide. Transfer pricing rules are also quite blurred when dealing with intangible goods, services, or monopolistic firms producing unique goods (for example, customized software or patent royalties for which no comparable market prices exist), and allow a good deal of licit avoidance opportunities.

Similarly, "industrial reclassification" is classifiable as evasion only if it violates some law, not when such reclassification configures a licit response to differential tax burdens. Therefore my view according to which Sørensen (2007) does not discuss tax evasion, but rather licit tax arbitrage, seems mostly correct. By the way, a simple text search of Sørensen's article supports the point, since the word "evasion" never occurs in the entire text. Nor tax sheltering is ever discussed or even just cited.

The important difference between avoidance and evasion, as far as my paper is concerned, is that while the first is not hidden to tax authorities and as such may in principle be estimated (thus providing values for the elasticities upon which a policy-maker may calculate tax rates through an inverse elasticity rule), tax evasion cannot be estimated as precisely, especially when trying to evaluate sectoral evasion. My calculations demonstrate that only with homogeneous tax evasion in those sectors affected by differential taxation, a policy-maker can overcome such lack of data and go for differentiated tax rates based on an inverse elasticity rule. This adds a preliminary test a policy-maker must run before following Sørensen's arguments, and that Sørensen himself did not discuss: an evaluation of tax evasion within each industrial sector.

When Sørensen asks (p. 19) *"Would policy makers be able to implement the Ramsey rule for capital taxation on the basis of observable variables?"*, my paper answers: if tax evasion is very low or homogeneous, then the answer is the one already provided in Sørensen (2007). Otherwise, the answer is a sound no, unless exact sectoral evasion estimates are available.

2) This Referee also states the following: *"In addition, with respect to the analysis itself and the calculus, I cannot see that it provides convincing arguments against the intuitive argument of Sørensen (2007), that if (under special circumstances) one nevertheless should accept differential capital income taxation, then one should tax more heavily sectors (firms) with a high degree of rent."*

I believe the Referee is right, but with a *caveat*. The definition of "rent" used by Sørensen (2007) is the following (p. 20): *"the pure profit shares (land rents) accruing to the fixed factor in the two sectors"*. And then he illustrates: *"An alternative way of explaining the role of the pure profit share is to note that a sector-specific capital tax works in part as an indirect tax on the pure profits generated in the sector, because it reduces investment in the sector, thereby curbing the demand for the fixed factor used in the sector. In itself a tax on pure profits is non-distortionary, so the greater the relative importance of rents in a sector, the less distortionary is a capital tax on that sector.*

While the labor income shares and employment levels appearing in the optimal tax formula (3.14) should be easy to observe, it may be more difficult to obtain data for the pure profit shares. However, as a first approximation one might identify the fixed factor with land and use data on land values to estimate land rents. Thus it appears that the estimation of optimal relative capital income tax rates on the basis of observable variables need not be exceedingly difficult. In particular, our analysis suggests that sectors with a very high capital intensity coupled with insignificant inputs of land and natural resources are candidates for a relatively lenient tax treatment. Perhaps this observation helps to explain why so many countries have chosen to offer very favorable tax treatment of the highly capital-intensive shipping industry."

Sørensen is of course right in identifying data on land rents as a tool to proxy pure profits. My paper does not argue this point, also because land value is hardly hidden to tax authorities. The question is, what about sectors and firms where land does not play a relevant part as a production input? Again, the policy-maker is forced to look directly at the shares of pure profits. And again, such data may be differentially affected by heterogeneous tax evasion.

3) I agree with the Referee that some language polishing will help making this paper more readable. I will submit it to a professional editor.