Review of: "A Dynamic Model for an Optimal Consumption Tax Rate"

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I had the pleasure of reading the paper on Qeios. My comments are listed below.

While the idea of a distributor, who is linking producers and buyers, is an interesting extension, there are some significant limitations that raise issues with the plausibility of the analysis and the results obtained.

First, it is not clear to me how the within-period interaction with the producer and buyer, then repeated in an infinite-horizon setting, will matter much. More specifically, in neoclassical micro theory, producers are simply production sets, or technologies, so the model is isomorphic to a setup where the distributor has direct access to the production technology, i.e., integrate production and distribution in one.

It is not clear in the model why a distributor is needed? Is it because of information costs, transaction costs, or uncertainty? It is mentioned that the distributor manages inventory, but that is a dynamic problem, which is not in the paper. The current way of modelling is quasi-dynamic, at least in this dimension. Alternatively, if the problem is stochastic supply/demand, there is room for a stochastic control problem. But I did not see an expectations operator anywhere. If agents make decisions after the stochastic process is realized, then the problem is equivalent to a deterministic one, but then it is not really reflecting the story in the paper.

Next, the paper is about optimal consumption taxation – and the author refers to Ramsey taxation, but the authors do not perform analysis in general equilibrium. Instead, the analysis is in partial equilibrium, so the welfare cost is mismeasured. There is a need for several corrections: (1) the welfare effect needs to be based on a utility finction; (2) fiscal policy needs to be specified in full, i.e, authors need to specify what is going on with the revenue from taxation – how is it spent? (3) what is the substitution effect that is accentuated as a result of the change in relative prices– when consumption is more expensive, consumer switches to more leisure? (4) what exactly is the distortion on consumption? This is a tax on demand. Also, there is no distortion over time, as consumption tax is the same over time. (5) the discount rate in equilibrium needs to reflect the market interest rate (adjusted for taxes and depreciation) – it is not exogenous, but rather an equilibrium object, hence endogenous variable. If there is no capital, how is r determined?

In particular, for an optimal taxation problem, we need the welfare effect to take into consideration the transition to the steady-state, not just steady-state to steady state (even though the convergence is quite fast, so the transition time is very small relative to time spent at the steady-state.

Would not the distortionary effect be quite small? It has to be computed in terms of percentage consumption lost…

How is the firm problem affected from the consumption tax?

The distortionary effect depends on relative price elasticities, which are endogenous.

For the VAT, it is imposed on the merchant (the merchant needs to send the money to the tax authority) – but merchant pass it onto the consumer (and the split of the tax burden depends on the relative price elasticities).

Is it not the case that the optimal consumption tax – based on the definition in p.1 – should be 0? Then what is the interesting question?

Where is this K_m coefficient coming from – the adjustment process is ad hoc…the information friction needs to be modelled explicitly.

Not clear why the producer cannot sell directly to the consumer, and gets only alpha of the price…This aspect needs to be better modelled in my opinion

In equilibrium, r and R(t) need to be linked.

How is the reference price c determined?

Consumer problem on p. 14 , is not well defined, as the prices are part of the equilibrium

Welfare loss needs to be computed in terms of compensatory variation - as % additional consumption, which, when given to the consumer, would make him/her indifferent to the consumption under no consumption tax. Otherwise, the numerical example is not consistent with general-equilibrium welfare effect of taxation.

Overall, I suggest the model to be reworked with better micro-foundations, and then solved and analyzed in general equilibrium.