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

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Potential competing interests: No potential competing interests to declare.

This paper addresses a very interesting topic about how to obtain the optimal consumption tax rate based on a dynamic model. However, after reading the paper carefully, I don't think it is qualified enough to be published at the present stage. Several points need to be refined.

(1) Since the theme of the paper is the consumption tax, the authors should provide more detailed discussions on it. In this version, the authors used a significant amount of space to analyze the decision-making process of the producer, the middleman, and the consumer (i.e., sections 2 and 3) and obtained the interconnection of their strategies. However, in these two sections, tax was not included in the model. The optimal tax level was briefly addressed in section 4. Although the model was based on the previous sections, there were necessary discussions on the tax missing. For example, what is the difference between the optimal tax rate and the one without considering the efficiency losses during the price adjustment process? How does the optimal taxation proposed by the authors affect the benefits of the producer and consumer and why? What factors may drive the optimal tax rate up or down, etc.

(2) In section 6.2, it was proposed that the producer's decision is connected to p-c, where c is regarded as a reference price. Subsequently, the influence of tax on the system is demonstrated by the modification of c (i.e., C). Based on this mechanism, when the government introduces a consumption tax, the producer reacts by adjusting production, which subsequently impacts the consumer's purchase through the middleman's market pricing. However, in actuality, it appears that consumers initially respond to a tax by reducing their consumption, followed by the producer adjusting their output to align with demand. Therefore, is there any literature or evidence that supports Equation (17)? A more convincing analysis is required.

(3) The paper's references appear to be outdated, and while the authors have listed the relevant studies, they have not provided a coherent review.

(4) The numerical solution is too simplistic to provide adequate information. Readers may expect to see a discussion of the potential variances in the optimal tax level as well as the underlying managerial implications.