Comments on Do Outsourcing Services Provided by Agricultural Cooperatives Affect Technical Efficiency? Insights from Tobacco Farmers in Guizhou, People’s Republic of China

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This paper examines the effect of outsourcing services from agricultural cooperatives on technical efficiency. The technical efficiency is measured using the one-step estimation of the stochastic frontier production function.

Key findings are that:

(1) The farmers’ decision to outsource agricultural services provided by cooperatives resulted in an 47.4% increase in technical efficiency;

(2) The effects are quite heterogenous among different types of outsourcing services.
Research subject: outsourcing services provided by agricultural cooperatives

The literature on the effects of outsourcing services and technical efficiency has a long history. The current findings are not novel in terms of both methodology and quantitative results. The three contributions in the current manuscript is not sufficient to contribute to the general field of agricultural economics.

A potential innovative perspective is that you focus on the outsourcing service provided by agricultural cooperatives instead of professional commercial firms or institutions.
Research subject: outsourcing services provided by **agricultural cooperatives**

Suggestions:

1. In the motivation part, you need to highlight what are the key characteristics of the services provided by **agricultural cooperatives**, for example, prices, service types, payment methods etc. In this way, you can illustrate why it is worthwhile to investigate this issue and how these characteristics might affect the technical efficiency.

2. In the result part, I recommend you to compare your results with existing literature on outsourcing service and technical efficiency in general.
The selection of outsourcing service is endogenous. It is not quite clear what are the factors influencing the choices on outsourcing services.

Please report the result of Equation (3):

\[ Outsourcing_l = \delta_0 + \delta_1 Z_l + \delta_k C_{kl} + \gamma_l \]  

(3)

Then, you put the control variables influencing outsourcing into the main regression as controls. This could to some extend mitigate the issue of omitted variables.
The “plug-in” method cannot fully handle the issue of endogeneity. It is expected that OLS could overestimate the effects. But it is surprising that the adjusted coefficient is smaller.

Suggestion 1: Plot the level of technical efficiency among different groups of outsourcing service usage. Check if the group using more outsourcing service has higher technical efficiency. If so, the current ‘plug-in’ method may not work.

Suggestion 2: You should try to use IV and 2SLS method to address this issue.
1. You did not test the mechanism on the influencing channels.
2. Abstract: you reported two results. Readers may get confused.
3. Table 5 is tedious. One can read Figure 2 instead. Remove this table.
4. Page 7 Paragraph 2 you can put the discussion on CD CES and translog functions in a footnote or the appendix.
5. Why are you using a different model in the heterogenous effect part?