

Ms. Ref. No.: Economics-1467-1

Title: FTA Effects on Agricultural Trade with Matching Approaches

Journal: Economics

Referee Report

Summary:

This paper applies the propensity-score matching method to estimate the effects of FTAs on Korean agriculture trade in 2010 and 2012. The paper concludes with a positive effect on the treated for both years and a larger effect in 2012.

Comments:

1. The writing is not understandable in most parts of the article. Many arguments are fallacious or logically unsound. Understanding of econometrics methods is also incorrect in many instances.
2. On p.4, paragraph 1: What do you mean by “this study uses propensity score matching (PSM) — a **non-empirical** approach”? PSM is a semi-parametric econometric approach.
3. On p.4, paragraph 3: The following statement is rather outdated. By now, it is well recognized that the gravity model of trade is consistent with many theoretical trade models, the classical, the new trade theory, and the new trade theory with firm heterogeneity. Multilateral resistance terms are now also a standard component in empirical gravity estimations that control for potential general equilibrium effects.

“The gravity model adds geographical factors—including economic scale and distance, inter alia—to analyze both the factors that determine trade volume between bloc economies and the welfare effect of FTAs. However, it is only weakly based on economic theory, and it is criticized for its lack of consideration of substitution effects among countries (Bikker 1987).”

4. On p.6, paragraph 2: Regarding Chang and Lee (2011), they study the effect of GATT/WTO membership on trade. The GATT/WTO are multilateral trade agreements, not regional/bilateral FTA agreements as you mistakenly stated.
5. On p.7: Your interpretation of average treatment effect (ATE) appears to be completely wrong. ATE is simply the weighted average of the average treatment effect on the treated (ATT) and the average treatment effect on the untreated (ATU) with weights reflecting the frequency of treated and untreated observations. Your concern of selection bias based on **observables** can be controlled by the matching approaches, whether it is ATE or ATT. Simply put, ATE is not the simple group mean difference between the treated and untreated group as you interpreted in the paper.
6. Footnote 5: Your statement in this footnote suggests that you may have implemented ATT in a wrong way. You should look for a closest match from the control group for each treated observation, and not the reverse—looking for a closest match from the treatment group for each untreated observation.
7. Tables 8 and 9: You should indicate what is in the brackets and what is the unit of the estimates.
8. Table 10: As suggested above, your use of the term ATE is erroneous. What you are presenting is simply unmatched group mean difference, not ATE.
9. p.16: Your claim that previous studies on FTA have not controlled for selection bias on observables is incorrect. If the studies have conducted matching, IV, panel fixed effects, or Heckman two-stage estimations, they have tried to taken into account potential selection bias on observables. It is selection bias on unobservables that most studies cannot and did not control for, but neither did your study.