



SDI Review Form 1.6

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	MS: 2012/AJEA/1969
Title of the Manuscript:	Socioeconomic Factors Influencing Adoption of CODAPEC and Cocoa High-Tech technologies among Smallholder Farmers in Central Region of Ghana

General guideline: Reviewers are requested to follow these guidelines during review: *(Note: Title of different sections as proposed below may differ in case of review paper / case reports)*

- Introduction *(Is the problem/objective of this study original, important and well defined?)*
- Materials & methods *(Kindly comment on the suitability of the methods. Sufficient details of the methods should be provided to allow peers to evaluate and/or replicate the work)*
- Results & discussion *(Kindly comment on: 1. Are the data well controlled and robust? 2. Authors should provide relevant references during discussion. 3. Discussion and conclusions should be based on actual facts and figures. Biased claims should be pointed out. 4. Are statistical analyses must for this paper? If yes, have sufficient and appropriate statistical analyses been carried out?)*
- Conclusion *(Is the conclusion supported by the data, discussed inside the manuscript? Conclusions should not be biased and should be based on the data, presented inside the manuscript only)*
- Are all the references cited relevant, adequate? Are there any other suitable current references authors need to cite?
- This form has total 9 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part and write here 'Corrected'/ if not agreed, give suitable justifications)
COMPULSORY REVISION comments	1) This research problem may be an important issue for Ghana, but it is not that novel theoretically. There have stack of similar articles and both explanatory variables employed in this paper and related results have appeared in a large number of the former research. 2) Research subject of this paper is smallholder farmer, but the author didn't explicitly define smallholder farmer and didn't tell us the differences between smallholder farmer and farm owner (row 37). As we all know, smallholder farmer in developing countries has its distinctive characteristics. Furthermore the author didn't declare that all 250 households they had surveyed (row 102) were smallholders. If not all 250 households were smallholders, the independent variable farmsize (row 159) may be problematic, and thus research results may be biased. 3) Dummy variables Credit and Price's mean were only 0.05 and 0.02 respectively, suggesting that only 12 of 250 households have access to credit and only 5 of 250 households report high price expectation. And this means that independent variable Credit and Price are lack of heterogeneity. In econometric theory, these two variables have low forecast significance. 4) The depiction of Tobit model estimation process isn't sufficient. Why robust standard errors and covariance (row 237) was employed. 5) Policy recommendations based on the discussion	1) This is not true; adoption in most literature is measured as dichotomous variable. However, in this instance is measured as index, this makes it novel. The fact that most explanatory variables are used in other papers do not necessary mean the study is the same. Moreover, this implies that nobody needs to cite other works to support their findings. 2) There are individuals in Ghana, who owns cocoa farms but hire caretakers (farm manager) to carry out day-to-day farm activities for them. These are professional in the other fields who have invested in cocoa farms. Smallholder farmer are individual with farm size ranging between 0.25- 10 hectares. These categories of individuals depend solely on cocoa farm and other farm activities /enterprises for their sustenance. The row 102 is corrected 3)Corrected 4) to correct problem of heteroscedasticity which automatically generated by E-view software



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	<i>results is not impressive enough.</i> 6) <i>The Policy recommendations “emphasis should be placed cocoa extension services to educate the farmer about the importance of the technology attributes so as to increase level of adoption” (row 394-396) have no support from the previous data and discussion.</i> 7) <i>In table 1, the mean of variable Farm Size is only 9.03 m², which is too small. This must be a mistake.</i>	6)The policy implications of the paper have been improved and expanded 7) Corrected, the value is in hectares
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Minor REVISION comments	1) Some number of tables is misdirected. "see Table 1" in row 65 should be "see Table 2". "see Table 1" in row 322 should be "see Table 2". "see Table 2" in row 336 should be "see Table 1". 2) In row 146 the theoretical model has one mistake that $Y_t = \begin{cases} 0 & \text{if } Y^* \leq 0 \\ Y^* & \text{if } 0 < Y^* < 1 \\ 1 & \text{if } Y^* \geq 0 \end{cases} \text{ should be}$ $Y_t = \begin{cases} 0 & \text{if } Y^* \leq 0 \\ Y^* & \text{if } 0 < Y^* < 1 \\ 1 & \text{if } Y^* \geq 1 \end{cases}$ 3) I can find many obvious syntax errors in this paper, such as row 188-189, row 207-209, row 311-312, row 336-339, row 342-344, et al.	1)corrected 2) corrected 3) corrected
Optional/General comments	1) The author didn't tell us what kind of information had been collected cross-sectional households survey, such as household demographic characteristics, resources, crop production activities, et al. 2) The dependent variables may be measured by another indicator. The technology adoption level, in this paper, is defined as the ratio of number of attributes adopted to the total attributes package, however, the intensity adoption was defined, in many articles, as share of farm area utilizing the technology. Assume that there are two households one adopt all of the technology attributes just in a single small farm plot, and conversely the other one just adopt single technology attribute but in all of his farm plots. How can we distinguish which one have higher adoption	1) This extra information is not relevant under of context this paper. The reviewer should remember that research paper is such that one cannot integrate all the available information into it, but essential. However, those socioeconomics variables 2) The study is not looking at varieties attributes as mentioned in most literature, but rather what goes into production process, that is, agronomic practices. This makes it a novel procedure to estimate adoption process.



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	<i>degree under such circumstances.</i> 3) <i>The explanatory variables Social Capital, Credit, Training, and Price are dummy variables and the problem is that in this paper the author didn't explain why they used dummy variables instead of continuous variables.</i> 4) If introduction of Survey farmers technology adoption situation (from row 240 to row 253) can move to part 2, the structure of this paper may be better. Swapping the order of table 1 and table 2 may reach the same effect.	3) The is now way to measure social capital by using continuous, since this is dichotomous variable. This is estimated as membership to club, society e.t.c The price used in the paper captures future price expectations. Credit and training 4) corrected
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