SDI Review Form 1.6

Journal Name:	**Asian Journal of Agricultural Extension, Economics & Sociology**
Manuscript Number:	**Ms_AJAEES_41961**
Title of the Manuscript:	**An improvement of robust estimator using known values of Probability weighted moment for finite population variance**
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline)

PART 1: **Review Comments**

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments		
Minor REVISION comments	This manuscript suggests a new robust ratio estimator for the population variance (using probability weighted moments as the auxiliary information. This new estimator, numerically (via example) perform better than the existing estimators in terms of square error and bias. **General rules about the format of the expressions:** (a) All the mathematical notations/quantities that the authors use have to be in the **same size** as the text is, and in **italics** (or in "math style" in MathType), for example $X, x, f(x), i, j, t$, etc. instead of $\mathrm{X, x, f(x), i, j, t}$, respectively, while known mathematical function should be in **upright** form (non-italics, or "function style" in MathType), like $\sin x, \log y, \exp(x)$, etc. instead of $sinx, log\,y, exp(x)$ etc. Moreover, numbers should be in **upright** form (otherwise use bold or italics for emphasizing). (b) When you write in-line mathematical expressions, avoid (when it is possible) large mathematical notations. For example, you can write $f(x) = x/(1-x)$ instead of $f(x) = \frac{x}{1-x}$. Otherwise, use equation lines, where a new line is devoted for those expressions, for example $$f(\mathrm{x}) = \frac{x}{1-x}.$$ (c) Please put a full stop at the end of an equation line if your sentence ends there, or put a comma if your sentence continues after the equation line. Please apply the above general rules throughout your manuscript. Here are some minor revision comments: *Note:* The text in red below represents the suggested changes/additions. **Page 1.** **Lines 8-9:** Please rewrite as "…auxiliary information of the probability weighted moments. Properties associated with the proposed estimators are assessed by mean square error and bias through a numerical demonstration. We have also…". **Lines 16-22:** Please rewrite as "Here we consider a finite population $U = \{U_1, U_2, \ldots, U_N\}$ of *N* distinct and identifiable units. Let *Y* be a rea l variable with value Y_i measured on U_i, $i = 1, 2, \ldots, N$ i given a vector $[Y_1, Y_2, \ldots, Y_n]$. Sometimes in sample surveys, information on auxiliary variable *X*, correlated with study variable *Y*, is available and can be utilized to obtain the efficient estimator for the estimation of population variance. With this modification, our aim is to estimate the population variance $S_Y^2 = \frac{1}{N-1}\sum_{i=1}^{N}(y_i - \bar{y})^2$ the based on the random sample selected from population *U*, to obtain…". Please, apply general rules (a)	Noted

	and (b) to the entire manuscript. Moreover, it is more preferable to change all the subscripts having x or y, to X and Y, i.e. you should write C_X or $\beta_{1(X)}$ instead of C_x or $\beta_{1(x)}$ respectively. **Line 41:** Please specify quantities λ_{22} and f. Put also a full stop at the end of your equation line (please, apply general rule (c) to the entire manuscript). **Page 2.** **Line 43:** Please specify quantity α. **Line 47:** Please, put a full stop at the end of your equation line (please, apply general rule (c) to the entire manuscript). **Line 50:** Please, put a full stop at the end of your equation. Put also the corresponding line numbering at the right end of your equation line, not in a new line after them. Apply this to the entire manuscript. **Lines 68-71:** Please, put a coma at the end of your equation and put the line number at the right end of your equation line. Then, change "Where" to "where", and then join lines 70 and 71. Please, apply general rule (c) to the entire manuscript). **Lines 76-77:** Please put a full stop after $p=1$ and join these lines to one. **Page 3.** **Line 104:** Please, specify the quantities A2. **Lines 114-115:** Please, rewrite as "…existing estimators in terms of mean square error and bias, since they are significant lower than the corresponding values of the existing estimators.".	
Optional/General comments		