



SDI Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_CJAST_41963
Title of the Manuscript:	A New Modified approach for the improvement of new estimator using known value of Downton's method for estimating the 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>)



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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	This manuscript suggests a new modified ratio estimator for the population variance (using the auxiliary information of Downton's method. This new estimator, numerically (via example) perform better than the existing estimators in terms of square error and bias.	
Minor REVISION comments	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 $X, x, f(x), i, j, t$, 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 $\sin x, \log y, \exp(x)$ 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 $f(x) = \frac{x}{1-x}.$ (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. Line 9: Please rewrite as "...and bias through a numerical demonstration. We have...". Lines 15-21: Please rewrite as "Here we consider a finite population $U = \{U_1, U_2, \dots, U_N\}$ of N distinct and identifiable units. Let Y be a real variable with value Y_i measured on U_i, $i = 1, 2, \dots, N$ given a vector $[Y_1, Y_2, \dots, Y_n]$. 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) 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 $\beta_{l(x)}$ instead of C_x or $\beta_{l(x)}$ respectively. Line 34: "...modified ratio estimators. D = Downton's method.". Please provide a reference citation concerning the Downton's method.	



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	Line 40: Please specify the quantities f and λ_{22}. Put also a full stop at the end of your equation line (please, apply general rule (c) to the entire manuscript). Page 2. Line 42: Please specify the quantity α. Line 46: Please, put a full stop at the end of your equation line (please, apply general rule (c) to the entire manuscript). Line 49: Please, put the line numberings at the right end of your equation lines, not in a new line after them. Apply this to the entire manuscript. Lines 60: Please, rewrite as "In this section, we shall derive the efficiency...". Please, put a coma at the end of your sentence. Lines 67-70: Please, put a comma at the end of the equation in line 67, put the line number at the right end of this equation line, replace "Where" with "where" in line 69, put a comma at the end of line 69, and then join lines 69 and 70 to form one line. Lines 75-76: Please put a full stop after $p = 1$ and join these lines to one. Line 77: Please, put some space before and after "if". Page 3. Line 103: Please, specify the quantities A_2 and n. Line 112: Please, change to "Conclusion". 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.".	
<u>Optional/General</u> comments		

Reviewer Details:

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