

## Review Form 1.7

Journal Name:	<b>Asian Journal of Probability and Statistics</b>
Manuscript Number:	<b>Ms_AJPAS_96810</b>
Title of the Manuscript:	<b>A Discrete Analogue of Complementary Exponentiated-G Poisson Family of Distributions: Properties and Estimation</b>
Type of the Article	<b>Original Research Article</b>

### **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:

(<https://www.journalajpas.com/index.php/AJPAS/editorial-policy> )

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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)
<p><b>Compulsory</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li>3. <b>Is the abstract of the article comprehensive?</b></li> <li>4. <b>Are subsections and structure of the manuscript appropriate?</b></li> <li>5. <b>Do you think the manuscript is scientifically correct?</b></li> <li>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><b><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></b></p>	<p>My main concern is the survival function in (8). Since <math>S = 1 - F</math>, equation (8) should be <math>G(x+1)</math> not <math>G(x)</math>.</p> <p>Page 3</p> <ol style="list-style-type: none"> <li>1. second paragraph A flexible discrete generator of distributions is introduced, and it's called <i>discrete</i> CEGP (DCEGP) family of distributions.</li> <li>2. Paragraph above (5) <i>discrete</i> <math>x(dX) = X</math>, should be "<i>discrete</i> <math>X(dX) = x</math>,"</li> <li>3. Equation (5) <math>P(x \leq dX &lt; x+1)</math> should be "<math>P(x \leq X &lt; x+1)</math>" Because here the domain is <math>x = 0, 1, 2, \dots</math>, I think the domain for equations (1)-(4) should be <math>x &gt; 0</math></li> <li>4. Below (5) The pmf of the drv, <math>dX</math>, can be viewed as discrete concentration of pdf of <math>X</math>.</li> </ol> <p><b>Page 4</b></p> <ol style="list-style-type: none"> <li>1. <b>Equation (8)</b> <b>It should be <math>G(x+1)</math> because <math>S = 1 - F</math></b> <b>All of your work from page 7 should be revised .</b></li> <li>2. Equation (9) Denominator should be <math>G(x+1)</math></li> <li>3. Below Equation (9) There are some problems associated with the definition of (what?).</li> <li>4. Equation (10) Numerator is <math>G(x+1)</math> and denominator is <math>G(x+2)</math></li> <li>5. In section 2.1.1 <math>p(dX \leq xu) \geq u</math> and <math>p(dX \geq xu) \geq 1 - u</math></li> </ol> <p>Page 5</p>	

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	<p>1. first line in the proof</p> <p><math>p(X \leq x) \geq u</math>, from (57)</p> <p>2. (3)</p> <p>It should be <math>G &lt;</math> or <math>=</math></p> <p>3. below (17)</p> <p>The variance of DCEGP distribution can be obtained by using equations (15) and (16)</p> <p>Page 6</p> <p>1. Equation (23)</p> <p>The pmf is not a function of <math>i</math>.</p> <p>2. Equation (24)</p> <p>Where does <math>s</math> come from?</p> <p>3. First paragraph in 2.1.4</p> <p>It can be expressed as</p> <p>4. Above (27)</p> <p>when <math>X \sim \text{DCEGP}(\alpha, \lambda, \xi)</math>, Rényi entropy can be derived as</p> <p>Page 7</p> <p>1. (28) and (29)</p> <p><math>-\log(f)</math> should be in the summation.</p> <p>2. First paragraph in 2.1.5</p> <p>The mean residual lifetime (MRL) of DCEGP...</p> <p>3. (30)</p> <p>See my comment on page 4. The survival function should have <math>x+1</math>.</p> <p>Denominator should be <math>x^0 + 1</math></p> <p>Also <math>\exp(\alpha)</math> should be in the summation.</p> <p>4. Paragraph below (30)</p> <p><math>A_v</math> should be <math>AV</math></p> <p>5. (31) (32)</p> <p>Again, the survival function should have <math>x+1</math>, not just <math>x</math></p>	
<p><b>Minor</b> REVISION comments</p> <p><b>1. Is language/English quality of the article suitable for scholarly communications?</b></p>	<p>See my comments above</p>	
<p><b>Optional/General</b> comments</p>		

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**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(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)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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