Paper: **"Discovering the Relationship Between Big Data, Big Data Analytics, and Decision Making: A Structured Literature Review"**

Corresponding Author: Daniela Di Berardino

Peer review:

Reviewer 1: Nicasio Njue
University of Nairobi, Kenya

Reviewer 2: Washington Okeyo
Management University of Africa, Kenya

Reviewer 3: Safae Laamrani El Idrissi
Ibn Tofail University, Morocco

Reviewer 4: Angelica Sterling
Universidad del Caribe, México

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<table>
<tr><td>Reviewer Name: Dr. Njue, Nicasio Gicovi (PhD)</td><td></td></tr>
<tr><td colspan="2">University/Country: Kenya</td></tr>
<tr><td>Date Manuscript Received: 25th May, 2023</td><td>Date Review Report Submitted: 26th May, 2023</td></tr>
<tr><td colspan="2">Manuscript Title: Big Data and decision-making: a structured literature review</td></tr>
<tr><td colspan="2">ESJ Manuscript Number:</td></tr>
<tr><td colspan="2">You agree your name is revealed to the author of the paper: Yes</td></tr>
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</table>

Evaluation Criteria:

Please give each evaluation item a numeric rating on a 5-point scale, along with a thorough explanation for each point rating.

Questions	*Rating Result* [Poor] **1-5** [Excellent]
1. The title is clear and it is adequate to the content of the article.	**4**

(The title is well framed. It attracts reader`s interest in understanding how big data informs decision making. However, there is need to contextualize the title in line with the scope of the empirical literature that is reviewed)	
2. The abstract clearly presents objects, methods and results.	**4**
(The abstract was adequately presented covering aim, methods and findings and recommendation. Nevertheless, it can be enhanced by tying the scope to that of materials reviewed)	
3. There are few grammatical errors and spelling mistakes in this article.	**4**
(This area was satisfactory. The writings are clear and easy to read. But the author need to avoid the use of absolute words or statements in a scientific study. For instance, "must" in the abstract	
4. The study methods are explained clearly.	**3**
(The methodologies presented were appropriate. Nevertheless, the author need be explicit on the sampling method used to select the 97 articles, the qualitative or quantitative methods used to do the meta-analysis. It is important to indicate the theoretical frameworks or foundations for the study	
5. The results are clear and do not contain errors.	**4**
(The results were well presented and illustrated in Tables and Figures in order to address the research question. Divergent and convergent aspects were cleared illustrated. However, the numbering of Figures is mixed up- figure 3 and 4.)	
6. The conclusions or summary are accurate and supported by the content.	**4**
(This area was satisfactory because conclusions and recommendations reflected the evidence presented in the findings)	
7. The references are comprehensive and appropriate.	**4**
(The references are quite relevant, balanced and largely recent)	

Overall Recommendation (mark an X with your recommendation) :

Accepted, no revision needed	
Accepted, minor revision needed	**X**
Return for major revision and resubmission	
Reject	

Comments and Suggestions to the Author(s):

The premise of the paper is both important and interesting. Strands and themes linking to the problem underscore were clearly synthesized. However, there was peripheral use of quantitative analytical techniques perhaps due to the qualitative nature of the study.

Your study can bear more valid and generalizable results when your study is fully conceptualized and supported by raw data

Comments and Suggestions to the Editors Only:
The paper is scientifically sound, good quality and worth consideration for your journal

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Date Manuscript Received: 25th May 2023	Date Review Report Submitted: 31st May 2023
Manuscript Title: **Big Data and decision-making: a structured literature review**	
ESJ Manuscript Number: 0611/23	
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Evaluation Criteria:

Please give each evaluation item a numeric rating on a 5-point scale, along with a thorough explanation for each point rating.

Questions	*Rating Result* [Poor] **1-5** [Excellent]
1. The title is clear and it is adequate to the content of the article.	**4**
(Please insert your comments)	
2. The abstract clearly presents objects, methods and results.	**3**

Present results more clearly in abstract	
3. There are few grammatical errors and spelling mistakes in this article.	**3**
See highlighted text in the manuscript	
4. The study methods are explained clearly.	**3**
The methods should be preceded with a clear articulation of the problem statement. As presented, it is not clear in the introduction the problem this study focuses on *It is desirable to explain the methods more clearly – for example what is bibliometric analysis, why was it chosen and how was it performed?* *Furthermore, the methods assume all countries involved in the study are equal in size, number of universities, population of researchers etc which is not true. A normalization criteria should have been used instead of number of articles*	
5. The results are clear and do not contain errors.	**3**
The results are in terms of number of articles. Some conversation factor should be used to ensure the size phenomenon does not affect the results. In the current results, USA is leading perhaps because it is big in size and has many universities hence more articles. A smaller country will never get a chance	
6. The conclusions or summary are accurate and supported by the content.	**3**
Conclusion and summary should be based on objectives – right now it is more open ended discussion and hence there is no clear distinction between conclusion and summary	
7. The references are comprehensive and appropriate.	**4**
Some references are very old e.g. 1963. The author needs to include more current references and focus mainly on the last 5 years or so	

Overall Recommendation (mark an X with your recommendation) :

Accepted, no revision needed	
Accepted, minor revision needed	**X**
Return for major revision and resubmission	
Reject	

Comments and Suggestions to the Author(s):

Improve writing style – introduction should be paragraphed
State objectives more clearly
The method should be stated and described more clearly

Improve the method by normalizing and standardizing the data to eliminate "size" effects and biases

Comments and Suggestions to the Editors Only:
The article is well intended. However there is need for thorough editing including language (grammar) which may be achieved by taking the article for professional editing

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Reviewer Name: Dr Safae LAAMRANI EL IDRISSI	
University/Country: Ibn Tofail University / Morocco	
Date Manuscript Received: 25/05/2023	Date Review Report Submitted:
Manuscript Title: Big Data and decision-making: a structured literature review	
ESJ Manuscript Number: 0611/23	
You agree your name is revealed to the author of the paper: Yes	
You approve, your name as a reviewer of this paper, is available in the "review history" of the paper: Yes You approve, this review report is available in the "review history" of the paper: Yes	

Evaluation Criteria:

Please give each evaluation item a numeric rating on a 5-point scale, along with a thorough explanation for each point rating.

Questions	*Rating Result* [Poor] **1-5** [Excellent]
1. The title is clear and it is adequate to the content of the article.	**4**
The title of the article perfectly reflects the subject of the work. The authors discuss the concept of big data and big data analytics and their contribution to strategic decision-making in companies. Additionally, it is preferable to mention the concept	

of big data analytics in the title, as big data and big data analytics are both independent and interdependent concepts.

2. The abstract clearly presents objects, methods and results.	5

The abstract of this scientific paper highlights the research objective, which is to conduct a structured literature review on the topic of big data and big data analytics.

The authors also mention their research methodology, which involves analyzing over 90 indexed articles.

3. There are few grammatical errors and spelling mistakes in this article.	4

The grammatical errors are highlighted in yellow on the authors' paper; they are only a few minor errors.

4. The study methods are explained clearly.	3

The research methodology was clearly stated, using the MASSARO method and adopting PRISMA, while opting for VOSViewer as the research software to avoid methodological errors. The authors formulated three research questions to better understand the research topic and define the research objective.

A significant number of articles were analyzed and filtered using keywords, starting with 2,310 articles and narrowing it down to 97 articles that discussed big data and big data analytics in relation to strategic management, decision-making in companies, marketing, ethics, gender and CSR (Corporate Social Responsibility).

But no research problematic has been explicitly stated. It is necessary to express the research problem as it is from this problem that research questions arise.

5. The results are clear and do not contain errors.	4

The results of the study only address research question 1 (RQ1) and demonstrate a weakness in the implementation of big data and big data analytics in the business world, as evidenced by the three peaks found in the literature (2012, 2016, and 2019). Based on the results obtained by the authors in response to the first question regarding the evolution of literature on big data, big data analytics, and managerial disciplines, 57% of the analyzed publications focus on Corporate Social Responsibility (CSR). The authors analyzed both academic and non-academic publications published in ABS indexed journals (3, 4, and 4*), and an additional 9% of the publications were initiated by professionals (non-academic).

Furthermore, the sample used includes both theoretical contributions and empirical studies exploring the usefulness of BD and BDA in business performance, their relevance to strategic decision-making, their impact on the market, as well as their utility in innovation policies, pricing strategies, and product development. However, few articles have addressed these links in practice. Nevertheless, connections have been found, demonstrating the cross-cutting nature of BD and BDA, such as the link between value creation, dynamic capabilities, and the knowledge-based view.

Finally, the authors have concluded this article by highlighting the research gaps and future perspectives. Among the identified gaps, the authors mentioned the near absence of research on this topic in developing countries to explore the link between

BD/BDA and social and environmental aspects. They also noted the lack of exploration in SMEs and family businesses.	
6. The conclusions or summary are accurate and supported by the content.	**5**
The authors have addressed several points in line with the theme and the initial research question stated. Indeed, the first point raised concerns SMEs, which represent a small percentage of investigations. Furthermore, the authors have provided a groundwork for future research in the field of management and decision-making related to BD and BDA. Lastly, the authors have acknowledged the limitations related to the methodology and the selection of references, as well as those excluded from this study. These limitations are perceived as research perspectives in relation to the phenomenon studied throughout this paper.	
7. The references are comprehensive and appropriate.	**5**
All the references used are already cited in the body of the text, and they are mostly recent references and respecting APA citation.	

Overall Recommendation (mark an X with your recommendation) :

Accepted, no revision needed	
Accepted, minor revision needed	**X**
Return for major revision and resubmission	
Reject	

Comments and Suggestions to the Author(s):

First and foremost, I would like to attest that the authors have conducted a structured qualitative analysis of this literature review, which is the most appropriate method of analysis for this type of research.

However, there are a few areas where the author could improve the clarity and precision of the description of the research methods and findings. For example:

- *It would have been better if the researchers had initially defined a research problem from which the three research questions mentioned in the paper's body derived.*
- *Attempting to provide answers to the three research questions could have added significant value to the work. However, it is worth noting that the response provided to the first question is indeed relevant.*
- *It would have been helpful to opt for more recent references, as the gap between January 2021 and June 2023 is considerable.*
- *The use of semantic analysis software is appropriate, and in the future, the authors can consider conducting a study to measure the impact of the contribution of Big Data (BD) and Business Data Analytics (BDA) in decision-making by adopting a quantitative approach.*
- *Overall, this is a strong research project that makes a valuable contribution to the understanding of the contribution of BD and BDA in the decision-making process toward this structured literature review.*

Comments and Suggestions to the Editors Only:

Thank you for submitting this research work and involving me in its evaluation. Indeed, it is a high-quality paper that reflects the authors' extensive reflection.

Moreover, the use of a qualitative approach is suitable for the nature of this research project, and the sample size used is of very high quality (the use of ABS 3, 4, and 4* indexed papers), reflecting the meticulousness of the authors.

However, I suggest that the authors address in future work the contribution of Big Data (BD) and Business Data Analytics (BDA) in decision-making within family businesses and small and medium-sized enterprises (SMEs), which have a different nature compared to large organizations.

Overall, this is a valuable contribution to the field, and I look forward to see the final version of your manuscript.

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Reviewer Name: Angelica Selene Sterling Zozoaga	
University/Country: Universidad del Caribe, México	
Date Manuscript Received:	Date Review Report Submitted: June, 7th 2023
Manuscript Title: Big Data and decision-making: a structured literature review	
ESJ Manuscript Number: 11.06.2023	
You agree your name is revealed to the author of the paper: Yes	
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Evaluation Criteria:

Please give each evaluation item a numeric rating on a 5-point scale, along with a thorough explanation for each point rating.

Questions	*Rating Result* [Poor] **1-5** [Excellent]
1. The title is clear and it is adequate to the content of the article.	**5**

The title reflects adequately the article content giving the whole idea of what the lector will find reading it.	
2. The abstract clearly presents objects, methods and results.	**5**
It includes the essential elements in an orderly manner to provide the lector with a vision of the primary purpose of the research, the methodology followed and the main results obtained.	
3. There are few grammatical errors and spelling mistakes in this article.	**4**
There are only a few mistakes. Strongly recommend separating the information into shortest paragraphs, to make the reading more fluent	
4. The study methods are explained clearly.	**4**
Even though the information is complete and the process is clearly explained, it is recommended to outline every phase of the methodology in the explanation, for example, it is clear which are the first and second phases, but further on, there is nothing that marks when the third, fourth, fifth and sixth phases are being explained.	
5. The results are clear and do not contain errors.	**4**
The results of the methodology implemented are presented in the results and discussion part of the article, it is recommended to put them in the same order that they are enlisted on the second step of the methodology: a) timing of publication; b) geographic distribution of authors; c) academic and professional papers; d) journals; e) relevance of the paper, through citation analysis; f) relevant keywords and themes. Another option is to change the order since the description of the phase. *It is recommended to include a subtitle for RQ1, RQ2, and RQ3 in the results section and to put the corresponding information in each section to make a clean connection with each one.* *RQ1: How is BD/BDA literature developing according to the role of these technologies in orienting the business strategies and the decision-making? – Results section* *RQ2: What are the scientific implications and emerging gaps in Strategic Management studies? - Research gaps and future directions section* *RQ3: What are the possible future directions for research? - Research gaps and future directions section*	
6. The conclusions or summary are accurate and supported by the content.	**5**
The conclusions are connected with the purpose and results of the investigation	
7. The references are comprehensive and appropriate.	**4**

Just a few errors, marked in yellow on the document.

Overall Recommendation (mark an X with your recommendation) :

Accepted, no revision needed	
Accepted, minor revision needed	**X**
Return for major revision and resubmission	
Reject	

Comments and Suggestions to the Author(s):

It is a very good and systematic literature review, the conclusions show that there is still a lot to do respecting the subject, and there are only a few recommendations to present the information more clearly

Comments and Suggestions to the Editors Only: