

Responses to the Editor and Reviewers' Comments

We appreciate the excellent services from the Editor and the reviewers of International Journal of Lean Six Sigma. We have revised the manuscript according to the suggestions made by the editor and reviewers. All the revised sentences are coloured blue. We hope this revised version can satisfy all the respected anonymous reviewers. The point by point reply to the comments are listed below:

Comments from the editor and reviewers:

Editor

The referee(s) have recommended publication, but also suggest some revisions to your manuscript. Therefore, I invite you to respond to the referee(s)' comments and revise your manuscript.

[Our response: Thanks for your positive comment. We have done our best to revise the manuscript.](#)

Our response to Referee 1

Comments:

1. I think author should add the significant information related to real supply chain resilience strategies. Is using automatic wood cutting machines for more standardized wood cut results can increase production flexibility? Are providing tracker machines tools to remove ship bearings or bolts can increase the SCR? I think it is more related to the speed of production. The author should make a table that indicated the previous research about LSS as well as the previous research about SCR. Add some important information to make the method used in this research clear. Add the implications of this study for research, practice and/or society. The author should add the clear explanation about the implication of this research as well as the gap between theory and practice. Last, please improve the format of your paper; its looks "dirty". For example, the author looks bad at making tables: no headings, no headers, no sources, etc.

Additional Questions:

Originality: Does the paper contain new and significant information adequate to justify publication?: The paper has good idea, combining between LSS and SCR. However, I didn't see the significant information related to real supply chain resilience strategies. Is using automatic wood cutting machines for more standardized wood cut results can increase production flexibility?

[Our response: Many thanks for your valuable comments. Changes have been made accordingly. Please see the manuscript changes highlighted in blue \(see page18, Table X. Technological improvements in the shipbuilding industry\). The proposed improvements used](#)

are the results of studies from several literature reviews or previous studies that have used resilience strategies to establish supply chain resilience, we then adjust to the causes that exist in the shipbuilding industry. When automatic wood cutting machine technology is used, it increases production flexibility and boosts resilience. Past research by Rajesh (2017) confirms that technological capability related to the level of standardization increases production accessibility and enhances resilience. Tracker machines/tools increase efficiency and productivity, reduce errors, rework and risk rates, improve worker safety, and improve customer satisfaction.

2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored? I think the author should make appropriate literature source related to LSS and SCR. I suggest the author to make a table that indicated the previous research about LSS as well as the previous research about SCR. So I can see the figure of all the previous research. The table should contain the name of authors, the object of the research, the variable using in the research, and the result.

Our response: Many thanks for your valuable comments. Changes have been made accordingly. Please see the manuscript changes highlighted in blue. Table VII shows previous studies related with supply chain resilience in shipping, transportation and logistics services.

3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate? The argument has built on an appropriate base of theory, concept however I didn't see the method that the authors use to determine the critical to quality (CTQ) for waste processing? Any discussion or consensus? Please add the explanation to make it clearly.

Our response: Many thanks for your constructive comments. We have revised it accordingly. Please see the manuscript changes highlighted in blue. The method that the author used to determine the critical to quality (CTQ) for waste processing is done by interviewing shipping company owners.

Besides, I also want to know how you determine the focus of this research (why the cargo contains coal to be sent to the coal stockpile of state-owned power generation). Please add your argument and the supporting data (if needed)

Our response: Many thanks for your valuable comments. We have revised it accordingly. Please see the manuscript changes highlighted in blue. At the define stage of shipping industry, the object of this research is a private shipping company. The main cargo in this company is coal and need to be carried to the state-owned power generator coal stockpile.

The main reason of this policy is economies of scale with the government control on the coal stockpile for the state-owned power station.

How you measure the amount of defect (m3) in each boat size. Any observation? If yes, how you arrange the observation, how many sample do you collect and how you measure or indicate the defect of the product?

Our response:

We have decided to exclude this part (defect in boat building industry) from this paper.

4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: Please make it more clearly, Although the author has A detailed explanation regarding the root of the problem and its sub-sections, which cause a mismatch between the quantity of goods ordered and at the time of collection, the explanation seem not clear, not detailed, only normative explanation. Like this "Some of the sub-causes were miscommunication, non-compliance with the rules, checkers who did not make POD form, and over-crossed jobs" What do you mean non-compliance with the rules? what rules. Then, how you find the number of RPN in Table VIII. What data you use (severity and occurrence) so you can find the value of RPN. It should be based the robust data if not it only your opinion; do not objective
The value of RPN in the other table also need more explanation.

Our response: Thank you for the constructive comments and suggestions. Our responses are as follows:

1. The meaning of “non-compliance with the rules” stood for workers who don’t follow the regulations made by the company, for example: the drivers do not stick to schedule in delivering the goods.
2. We have added the details FMEA result to the article in Attachment 2, which includes the severity, occurrence, and detection parts. The interviews are carried out with experts in the shipping companies.

The revised texts are highlighted in blue.

5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper? I cannot see that the author has identify clearly any implications of this study for research, practice and/or society. I also do not see that the author has identified the gap between theory and practice. I think, the author should add the clear explanation about the implication of this research as well as the gap between theory and practice

Our response: Many thanks for your valuable comments. We have discussed the gap between theory and practice in the rest of literature review section and the implication of this research in the abstract section.

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: Please send your manuscript to the professional proof read to guarantee the clarity of expression and readability, such as sentence structure, jargon use, acronyms,

Our response: Many thanks for your valuable comments. We have sent our paper to the professional proof read to guarantee the clarity of expression and readability.

Our response to Referee 2

1. Originality: Does the paper contain new and significant information adequate to justify publication? Currently, it was not showing the originality with respect to methodologies although there are new data elements specific to locations. The author(s) have the potential to introduce the originality for example: assessing the impact of lean six sigma operates and SCR on small, medium or large industries or type of data, or in according to the nature of activity. The originality is supposed to associate with the quantitative data analysis comparing the situation before and after the pandemic. The title specifically mentioned Covid-19 impact, but some data came from 2019, which will not be suitable to use as an argument.

Our response: Many thanks for your valuable comments. Since the defect measurements shipbuilding industry sigma level were done in 2019 before the pandemic era, we have decided to exclude them from this paper. This is because we were not able to visit the shipyard to get new measurements in 2020 due to the pandemic. Therefore, we focus on lean management for the shipbuilding industry by interviewing and discussing with the shipbuilding company owners through the WhatsApp and Zoom applications.

2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored? There are some literature reviews. However, there is not enough scientific back up in the deduction methodology e.g. how the improvement was decided? How the resilience strategies are selected? It cannot just be decided by the author (against bias). Back-up literatures or standard procedures or best practice could help with this inadequacy.

Our response: we have added the literature review in Section 2.1.1 to Section 2.2.3

3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate? There is a methodology structure; however each step of the analysis needs to be explained clearly.

Our response: We have revised the explanation following the flow chart section. We have decided to delete Section 3.2 because a case study for traditional shipbuilding, a liner shipping company, and a logistics service company can represent the maritime industry.

4. Results: Are results presented clearly and analysed appropriately? Do the conclusions

adequately tie together the other elements of the paper? Since the solution or method of analysis is not detailed/outlined in the paper, it is difficult to know where the results are determined and whether they are correct or not.

Our response: Many thanks for your valuable comments. We have analysed our results by discussing and comparing with previous studies.

5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper? With the proposed amendments and when they are all addressed accordingly, this research work could impact the practice (economic and commercial impact). But currently, without a strong back-up to justify the outcomes, it cannot be said that the results can be trustable.

Our response: Thank you for the constructive comments. We have justified the outcomes by comparing to other related studies.

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: There are grammatical and typo errors which have been indicated in the reviewer's copy of document and comments.

Our response: Thanks for the comments. We have edited our paper to improve its readability.

Our Responses to the Reviewers' comments

Journal Name: International Journal of Lean Six Sigma

Manuscript No.: IJLSS-11-2020-0196.R1

Manuscript Title: The application of Lean Six Sigma and Supply Chain Resilience in Maritime Industry during the era of COVID-19

Dear Editor,

We want to express our sincere thanks to the anonymous reviewers for their constructive comments and suggestions to improve the manuscript.

Comments of the Reviewer#1 and Our Responses

Recommendation: Minor Revision

Comments:

This revised paper is a much improved paper than the previous ones. There are areas where concise but clear paragraphs can be

Our response: Many thanks for your appreciations. We have edited our paper to improve its readability.

Additional Questions:

1. Originality: Does the paper contain new and significant information adequate to justify publication?: Yes. Albeit a long paper and some defined limitations, the results presented applications of LSS and SCR in maritime industries employing continuous improvement approach.

Our response: Many thanks for your valuable comments.

2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: Yes. A thorough literature review has been presented.

Our response: Many thanks for your valuable comments.

3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: Yes.

Our response: Many thanks for your valuable comment.

4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: Yes.

Our response: Many thanks for your valuable comment.

5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: The COVID-19 situation provides a different threshold in measuring the continuous improvement method which in a way provides a contrast in the LSS and SCR evaluation. If the author(s) could continuous monitor the performance till 2022 (at least), the impact of the research can be magnified.

Our response: Many thanks for your constructive comments. It could be our “homework” for our future research.

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: There are still few minor corrections needed. Author(s) should pay attention to the correct referencing format.

Our response: Many thanks for your constructive comments. We have revised our paper according to the comments.

Comments of the Reviewer#2 and Our Responses

Recommendation: Accept

Comments:

no comment

Our response: Many thanks for your positive comments.

Additional Questions:

1. Originality: Does the paper contain new and significant information adequate to justify publication?: yes

Our response: Many thanks for your appreciation.

2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: yes

Our response: Many thanks for your valuable comment.

3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: yes

Our response: Many thanks for your valuable comment.

4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: yes

Our response: Many thanks for your valuable comment.

5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public

attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: yes

Our response: [Many thanks for your valuable comment.](#)

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: yes

Our response: [Many thanks for your valuable comment.](#)

From: benny.tjahjono@coventry.ac.uk

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CC:

Subject: International Journal of Lean Six Sigma - Decision on Manuscript ID IJLSS-11-2020-0196.R2

Body: 09-Mar-2021

Dear Praharsi, Yugowati; Jami'in, Mohammad; Suhardjito, Gaguk; wee, hui ming

It is a pleasure to accept your manuscript IJLSS-11-2020-0196.R2, entitled "The application of Lean Six Sigma and Supply Chain Resilience in Maritime Industry during the era of COVID-19" in its current form for publication in International Journal of Lean Six Sigma. Please note, no further changes can be made to your manuscript.

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Thank you for your contribution. On behalf of the Editors of International Journal of Lean Six Sigma, we look forward to your continued contributions to the Journal.

Sincerely,
Prof. Benny Tjahjono
Guest Editor, International Journal of Lean Six Sigma
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Date Sent: 09-Mar-2021