Response to Reviewer 4 Comments

We are very grateful to reviewer for their valuable comments and suggestions that have much improved the manuscript. In the revised manuscript, we have carefully addressed these comments and suggestions, and these revisions are marked in gray. The following is summary of the main revisions, and we have made in response to the referees’ comments as below;

Point 1: Literature review: enough wide, sources are properly chosen and well commented, however authors can add some more paper on Sustainable Supply Chain Management from Sustainability journal
Response: We have expanded and cited the literature review from the suggestion of reviewer in order to better frame our study in the existing body of knowledge. (p. 3, in section 2.1, lines 107-123)

“Recently, there has been an increase in the global trends on environmental sustainability policy and practices [1-5]. The difference between sustainable supply chain and green supply chain is that the basic goal of the green supply chain is to reduce wastes and greenhouse gases in production. Yet, the definition of green supply chain generally emphasizes the characteristics of environmental process flow [6]. Whereas, the scope of sustainable supply chain is developed based on green supply chain management considering economic, environmental, and social dimensions [5]. Carter and Jennings [5] suggested that social awareness and environmental preservation are important components for an organization. Therefore, organizations should connect with environmental, social, and economic goals to achieve the organization strategy. Seuring and Müller [7] explained this topic that SSCM is a strategic management that covers risk management, strategy and corporate based on the triple bottom line principle, including systematic coordination of business processes. Meanwhile, sustainability is receiving consumers’ attention regarding the relationship between organizations and their suppliers in order to understand the sustainable development [8]. Hence, investigating the sustainability of suppliers is important to consider their social responsibility [9].”

Point 2: Unfortunately there is luck of results discussion in relation to previous studies.
Authors should evaluate their approach and methodology
Response: In section 4.6 the results and discussion, we have been more clarified and refer back to the existing literature. (p. 19-20, in section 4.6, lines 562-584)

This result were compatible with Zhou and Xu [9] where the most experts in case was recognized the sustainability of supplier should be pay attention the social responsibility.

Based on the results utilizing IF-DANP, the final weights can be ranked as; environmental planning (C24) ranks first with the highest weight value (0.083), and safety and health system (C32) occupies the last rank with lowest value (0.053) in all evaluation criteria. Environmental planning (C24), green image (C21), cost reduction activities (C14), delivery and service of product (C15), environmentally friendly materials (C22) criteria have
been ranked as top five criteria to SSS based on SSCM practices. Interestingly, from the results ranking, the enterprises are usually more sensitive to the environmental planning than the social responsibility. Therefore, consider only the score of the experience and knowledge is difficult to judge the social responsibility, which is in accordance with Zhou and Xu [9].

Furthermore, our findings are also applicable to improvements because they can be used to determine gaps in the aspired level of the criteria. Upon examining the findings obtained through the IF-DANP-mV model (Table 9), the performance results generated values which were arranged as \( S^3 > S^2 > S^1 \). This finding indicates that the best sustainable supplier in this case study is \( S^3 \). Moreover, our model also illustrates the means by which alternatives help a company reach its aspiration level for each criterion. Besides, the sensitivity analysis can be significant to evaluate the alternatives for SSS in SSCM practices. In the end, to further verify the validity of our proposed method, we provides the realistic evidence for the comparative analysis, the result shown that an integrated DEMATEL-ANP-VIKOR combine with intuitionistic fuzzy number can provides strategies for selecting improved alternatives to reach the desired aspiration levels apart from the ranking and selections, as also emphasized in Büyüközkan et al. [10].”

In addition, in the conclusion, we have more expand to specific what is the addition of our study and the knowledge show in p. 20-21, in section 6, lines 602-643.

1. We have the supplier evaluation criteria based on SSCM practice in economic, environmental, social aspects. In order to investigate suppliers’ implementation of SSCM practices, the potential suppliers with sustainability were discovered and selected. The data were obtained by combining them from the interview with procurement experts, and the validity of the three dimensions and a total of 13 criteria were confirmed. By constructing the list of evaluation criteria for suppliers and measuring their relative importance, enterprises can better understand the concept of sustainability [11]. Besides, enterprises can be employed for early supplier development, which also helps to focus on the target suppliers. Meanwhile, SSCM practices help suppliers to pay close attention to the area in which they can satisfy the requirements of enterprises.

2. This study extended MCDM under intuitionistic fuzzy environment, and proposed an IF-DANP-mV model. First, we applied the DEMATEL combined with the intuitionistic fuzzy method to construct a relationship network. Second, the IF-DANP approach was used to calculate the substantial weight of the criteria and overcome the dependence and feedback among the conflicting criteria and uncertain environment. As a result, intuitionistic fuzzy set is helpful to cope with uncertainty, and it is more flexible to handle precise problems. Meanwhile, DANP is a powerful technique which can be used to determine the relative weights of criteria, which is consistent with the results obtained by Govindan et al.[12] and Büyüközkan et al. [10]. Hence, enterprises can effectively enhance decision-making capability, and this model has the efficiency to consider uncertainty in human judgments. In order to evaluate the total performance scores and gaps (that is, the smaller, the better) at each aspiration level, VIKOR concepts were further modified. Our model demonstrates the case study of three supplier candidates, namely, \( S^1 \), \( S^2 \) and \( S^3 \). The VIKOR results indicate the ranking of sustainable supplier in descending order as \( S^3 > S^2 > S^1 \). A sensitivity analysis was also conducted to test the robustness of the proposed framework. Finally, in order to prove the merit of the propose approach, the comparison with traditional DANP-VIKOR methods shows that the IF-DANP-mV method performs better than the traditional DANP-VIKOR in dealing with uncertain information.
The benefits of a new extension approach can enhance decision making in a fuzzy environment and investigate more in-depth analysis of the interrelationships among criteria. By using the proposed approach, suppliers are more accurately ranked when various uncertainties are coped with. Enterprises can analyze the suppliers that have a great difference compared with the other methods. Moreover, the results can help suppliers to discover their weak links and improve their management level. On this basis, a strong relationship can be built between managers and their partners.

3. This work narrows the theoretical gaps identified by Memari et al. [13], who proposed SSS problem by using a multi-criteria intuitionistic fuzzy TOPSIS model to apply intuitionistic fuzzy number. However, their results demonstrate that the integration with TOPSIS ignores the interdependencies among criteria which can influence the outcome of the alternative ranking. Therefore, our study distinguishes itself from the study of Memari et al. to extend the MCDM method by applying the DANP to handle with the dependencies among decision criteria and modify the VIKOR method to identify the suitable alternative ranking. Our results are more accurate, and the realistic investigation based on a real-world case study is better than using single method.

With an increasing number of entrepreneurs focusing on sustainable development, especially sustainable supplier management [5], it is a challenge for several industries to consider the selection of sustainable suppliers. This study not only provides the effective model for measuring supplier selection performance, but also plays an audit role for practitioners to evaluate the standardized procedure based on sustainable supply chain management practices.