**Original Manuscript ID:** PONE-D-21-05748

**Original Article Title** Cross Border Project in China-Pakistan Economic Corridor and its Influence on Women Empowerment Perspectives

**To:** PLOS ONE

**Re:** Response to reviewers

Dear Editor,

Thank you for allowing a resubmission of our manuscript, with an opportunity to address the reviewers’ comments.

We are uploading (a) our point-by-point response to the comments (below) (response to reviewers), (b) an updated manuscript with yellow highlighting indicating changes, and (c) a clean updated manuscript without highlights.

Best regards,

Kumari Joti

**Reviewer#1, Concern # 1** The list of respondents is given by the local government, which is different from random sampling, which may affect the objectivity and explanatory power of the survey conclusion to a certain extent

**Author response:** Author would like to thank the reviewer for raising the query which helped in improving the quality of the paper. We have corrected the mistake . Action has been taken.

**Author action:** According to given comment we have incorporated above conern



**Reviewer#1, Concern # 2:** This paper pays attention to the impact of CPEC on EI, EO and QL, but the statistical model does not pay attention to other variables that may interact with CPEC. In reality, the impact dimension of CPEC on Pakistan exceeds the above three aspects, and the statistical model lacks control variables.

**Author response:** We appreciate the reviewer for deeply reviewing our manuscript. We have corrected this problem in the revised manuscript. Action has been taken in Section

**Author action:**

**Robustness Checks**

In this study, we take education level and age group as control variables. Both variables have significant role and can effect the results of the model. Therefore, both variables were assessed through performing group difference analysis in PLS. The results of education level indicated no significant different thus we only check model robustness on age as control variable. Table 9 depict the regression analysis of model.  From analyzing, first we can see the inverse relationship of EO with age group. Whereas, EI and QOL is comparatively higher than other groups. Overall, the depicted values clearly show the stability of proposed model.

**Table 9. Robustness Checks for Proposed Model**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | EO | EI | QOL |
| R Square Change |  |  |  |
| Model 1 | .664a | .441 | .429 | .32022 | .441 | .347 | .336 | .272 |
| Model 2 | .794a | .631 | .622 | .30100 | .631 | .315 | .285 | .216 |
| Model 3 | .665a | .442 | .421 | .43023 | .442 | .202 | .350 | .337 |



**Reviewer#1, Concern # 3**   There is no derivation of theoretical model in this paper. Based on theoretical analysis, the author determines the relationship between CPEC and EI, EO and QL, which is slightly weak.

**Author response:** The authors would like to thank the reviewer for spending precious time, and energy and for providing insightful comments. Action has been taken in section …

**Author action**

**Social Exchange Theory**

In essence, Social exchange theoryenvisions human connection and social behaviour as the exchange of physical or intangible activities based on the engagement's return or value [26,27]. It is founded on the idea that all interactions, rewards, and costs affect interpersonal relationships. People are more inclined to take action if they are rewarded, and they are more likely to choose an action plan with the highest and lowest cost of return [28,29]. The theory of social exchange has been employed in several research studies to stress the attitudes and reactions of local communities [2, 29,30,31]. In this regard, [29] believes that social exchange theory is the foundation for defining local populations' attitudes toward tourism development. Whereas, [32]applied the social exchange theory to assess local inhabitants' views regarding transportation and infrastructure development.Current research backs up the social exchange theory, which claims that the local population are getting favour and benefits from the CPEC. Residents will oppose the project if they believe it will have no impact on the neighbourhood. Local support is required for project development thusmore robust the local support the more significant the project's contribution to regional development and prosperity.



**Reviewer#1, Concern # 4:** The statistical methods used cannot fully express the relationship between data, and the possible relationship between variables (such as endogeneity) is not discussed.

**Author response:** Thank you very much for your very useful comments. We address each comment and respective improvement as follows

**Author action:**

**Assessment of Endogeneity Test**

We use systematic technique to analyze potential endogeneity[50], starting with Park and [51] Gaussian copula approach, which uses the latent variable scores from the original model estimation as input. We first check to see if the variables that could be endogenous are nonnormally distributed. We do so by performing a Kolmogorov–Smirnov test with Lilliefors correction on the latent variable scores of EI, QL, and EO, which serve as independent variables in the partial regressions of the PLS path model [52]. The results showed that none of the structures has a normal distribution of scores, which allows us to use the Gaussian copula technique by [51]. The results in Table 8 shows that none of the Gaussian copulas (i.e., EI, QL, and EO) is significant p value> 0.05. Specifically considering CPEC three predictor constructs as potentially endogenous reveals non-significant c copulas for EI 0.02268 (p value=0.72286), -0.1041 for QL (p value=0.10221), and 0.08152 for EO (p value= 0.07).We also evaluated all other Gaussian copula combinations in the model, and none of them are significant (see Table 8). As a result, we conclude that endogeneity does not exist in our study, implying that the structural model results are reliable in this study [50].

**Table 8**. **Assessment of Endogeneity test using the Gaussian copula approach.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model 1** | **IDVs** | **Estimate** | **Pr(>|t|)** | **Bootstrapped** |
|  | EI | 0.3463 | 0.00001 |  |
|  | QL | 0.25578 | 0.00000 |  |
|  | EO | 0.26769 | 0.00000 |  |
|  | EI\_star | 0.01866 | 0.68300 | 0.74211 |
| **Model 2** | **IDVs** | **Estimate** | **Pr(>|t|)** | **Bootstrapped** |
|  | EI | 0.37169 | 0.00000 |  |
|  | QL | 0.2883 | 0.00005 |  |
|  | EO | 0.273 | 0.00000 |  |
|  | QL\_star | -0.03456 | 0.47100 | 0.52896 |
| **Model 3** | **IDVs** | **Estimate** | **Pr(>|t|)** | **Bootstrapped** |
|  | EI | 0.36112 | 0.00000 |  |
|  | QL | 0.26448 | 0.00000 |  |
|  | EO | 0.18185 | 0.00898 |  |
|  | EO\_star | 0.05668 | 0.09067 | 0.21836 |
| **Model 4** | **IDVs** | **Estimate** | **Pr(>|t|)** | **Bootstrapped** |
|  | EI | 0.33954 | 0.00015 |  |
|  | QL | 0.38098 | 0.00002 |  |
|  | EO | 0.14611 | 0.05074 |  |
|  | EI\_star | 0.02268 | 0.72286 | 0.7515448 |
|  | QL\_star | -0.1041 | 0.10221 | 0.1404489 |
|  | EO\_star | 0.08152 | 0.07413 | 0.1035622 |



**Reviewer#2, Concern # 1:** The paper’s introduction section is not well organized therefore not well written at all. Too much reference has been cited in the introduction section which makes the reading uninteresting. There is hardly any linking conjunction, adverbs, propositions used in the whole manuscript which makes the paper incoherent. It seems that some references have been picked up from difference sources and jumbled up together. It’s also obsolete to use past tenses while stating a reference. There are no concluding sentences at the end of each paragraph of the introduction section. So, the introduction must be rewritten

**Author response:** Thank you very much for the reviewers' valuable comments on our manuscript. We have again revised the manuscript according to your kind advice and constructive suggestions. Enclosed, please find a detailed response to reviewers.

**Author action:**

According to given comment we have incorporated above conern.



**Reviewer#2, Concern # 2** The proof reading has not been done professionally. A lot of grammatical mistakes are also evident.

**Author response:** Thank you for mentioning the grammar errors. We have carefully revised the

manuscript and removed all typos and grammatical errors.

**Author action:** According to given comment we have incorporated above conern.



**Reviewer#2, Concern # 3:** The authors must clearly state why this study is important to conduct in the introduction section. The objective of the study is not mentioned in the introduction.

**Author response:** We appreciate the reviewer for deeply reviewing our manuscript. Action has been taken, and details are highlighted in the paper.

**Author action:**

This research work addresses two research questions, namely, (1) What measures and ways of realizing women's empowerment are involved in the transnational CPEC project?and (2) What is the impact of crossing CPEC route on local women?To address these questions, qualitative and quantitative approaches are adopted. For this purpose, a questionnaire is designed to tackle the issue by getting relative information which is used to address the problem of women's empowerment policies and activities. Therefore, releasing women's perspectives and opinions on CPEC's large-scale projects is a critical responsibility today because informed consent from local women can assist decision-makers in achieving their intended outcomes. This research has ramifications for various stakeholders; for example, the findings will assist local women in supporting large-scale CPEC projects since they believe they will benefit the future of CPEC, such as job prospects, education, and a good standard of life. Whereas, this also enables trainers to make informed investment decisions and evaluate projects that will have the most impact on social policy at the lowest cost. Theoretically, this study adds to the social exchange theory [16], which states that if local inhabitants see the project as having a positive outcome, they will reciprocally assist one another, with mutual advantages, including current and future benefits. The results analysis will help China and Pakistan to carry out CPEC activitiesby assisting local populations and engaging them in awareness campaigns effectively. Furthermore, the study can be used in both China and Pakistan to facilitate and aid their citizens due to the CPEC. The research findings could be crucial in attaining long-term development goals.



**Reviewer#2, Concern # 4:** The contribution of the study is very poorly stated in two sentences and shockingly understated and disorganized.

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**Author response:** The authors would like to thank the reviewer for spending precious time, and energy and for providing insightful comments .Action has been taken

**Author action:** According to given comment we have incorporated above conern



**Reviewer#2, Concern # 5:** Overall It is utterly confusing the purpose of the literature mentioned in the introduction. Are they to mention the shortcomings of the existing literature or for mentioning the importance of conducting this study?

**Author response:** Author would like to thank the reviewer for raising the query which helped in improving the quality of the paper.

**Author action:** Mentioned previous study in introduction section provides the importance of conducting this study.



**Reviewer#2, Concern # 6:** The gap or shortcomings of the literature has not been mentioned anywhere in the literature review section. The authors continue to describe different studies but did not mention the gap in the literature. This section must be rewritten as well. It’s really hard to understand what authors mean by mentioning these studies.

**Author response:** We would like to thank the reviewer for raising this important point. Action has been taken.

**Author action:** According to given comment we have incorporated above conern.



**Reviewer#2, Concern # 7:** The result and discussion section are very much disorganized. The authors should clearly state which studies are in line with their findings and which contradicts.

**Author response:** We thank the reviewer for this valuable suggestion. Action has been taken.

**Author action:** According to given comment we have incorporated above conern.



**Reviewer#2, Concern # 8:** The paper does not mention any theoretical or anecdotal evidences which actually justify the selection of the variables in the context of China and Pakistan economies.

**Author response:** We would like to thank the reviewer for pointing out this important issue Action has been taken.

**Author action:** According to given comment we have incorporated above conern.

**Social Exchange Theory**

In essence, Social exchange theory envisions human connection and social behaviour as the exchange of physical or intangible activities based on the engagement's return or value [26,27]. It is founded on the idea that all interactions, rewards, and costs affect interpersonal relationships. People are more inclined to take action if they are rewarded, and they are more likely to choose an action plan with the highest and lowest cost of return [28,29]. The theory of social exchange has been employed in several research studies to stress the attitudes and reactions of local communities [2, 29,30,31]. In this regard, [29] believes that social exchange theory is the foundation for defining local populations' attitudes toward tourism development. Whereas, [32]applied the social exchange theory to assess local inhabitants' views regarding transportation and infrastructure development.Current research backs up the social exchange theory, which claims that the local population are getting favour and benefits from the CPEC. Residents will oppose the project if they believe it will have no impact on the neighbourhood. Local support is required for project development thusmore robust the local support the more significant the project's contribution to regional development and prosperity.



**Reviewer#2, Concern # 9:** The robustness of the results has not been checked. The robustness can be checked by changing model idealizations or changing background conditions.

**Author response:** **:** We are very thankful for the reviewers for spending a substantial amount of time to look over the paper and providing valuable comments. We have improved the manuscript accordingly.

**Author action:**

**Robustness Checks**

In this study, we take education level and age group as control variables. Both variables have significant role and can effect the results of the model. Therefore, both variables were assessed through performing group difference analysis in PLS. The results of education level indicated no significant different thus we only check model robustness on age as control variable. Table 9 depict the regression analysis of model.  From analyzing, first we can see the inverse relationship of EO with age group. Whereas, EI and QOL is comparatively higher than other groups. Overall, the depicted values clearly show the stability of proposed model.

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