Read Me file to reproduce the results

The main codes to be compiled are well commented. Readers are requested to read the inside comments for better clarity to produce the results.

Estimates of the parameters given in Table 7 of Appendix C to produce Figure 1: Codes are in the folder "Figure_1".

1. Make a directory/folder.
2. In the last line of R code "Bivariate_Binary_Data.R" provide the appropriate path then run it to create a data xlsx sheet "Likelihood_data.xlsx".
3. In line 24 of MATLAB code "Likelihood_Output.m" provide the appropriate path and compile it to get the estimated values of the parameters.

Estimates of the parameters given in Table 8 of Appendix C to produce Figure 2: Codes are in the folder "Figure_2".

1. Compile "Output_Uniform_Figure_2" to get BODs based on Uniform prior. Use appropriate parameter space. In the current setting the code will produce BOD based on Clayton copula and the parameter space H_3.
2. Compile "Output_Normal_Figure_2" to get BODs based on Uniform prior. Use appropriate parameter space. In the current setting the code will produce BOD based on Clayton copula and the parameter space H_3.

Efficiency reported in Table 3: Codes are in the folder "Table3_result". The main code is "Table4_Output.m" that produces the result. The code produces the result when the Parameter Space is $\mathcal{H}_3$.

1. Choose appropriate parameter space. In the code $\mathcal{H}_3$ is chosen.
2. Get appropriate optimal designs from Table 8 in Appendix C. For example in the code we have taken optimal designs associated with $\mathcal{H}_3$ for the copulas FC, GC, CC, NC, and PC.
3. Compile code is "Table3_Output.m" that produces the result.

Efficiency reported in Table 4: Codes are in the folder "Table4_result". The main code is "Table4_Output.m" that produces the result. The code produces the result when True copula = FC and the Parameter Space is $\mathcal{H}_3$.

1. Choose appropriate parameter space. In the code $\mathcal{H}_3$ is chosen.
2. Get appropriate optimal designs from Table 8 in Appendix C. For example in the code we have taken optimal designs associated with $\mathcal{H}_3$ for the copulas FC, GC, CC, and NC.

3. Compile code is "Table4_Output.m" that produces the result.

Efficiency reported in Table 5: Codes are in the folder "Table5_result". The main code is "Table5_Output.m" that produces the result. The Parameter Space is $\mathcal{H}_2$.

1. Choose appropriate parameter space. In the code $\mathcal{H}_2$ is chosen.
2. Get appropriate optimal designs from Table 8 in Appendix C. For example in the code we have taken optimal designs associated with $\mathcal{H}_2$ for the copulas PC, FC, GC, CC, and NC.
3. Compile code is "Table5_Output.m" that produces the result.

Efficiency reported in Table 6: Codes are in the folder "Table6_result". The main code is "Table6_Output.m" that produces the result. The Parameter Space is $\mathcal{H}_2$.

1. Choose appropriate prior for ρ. In the code $(0.5, 1)$ is chosen.
2. Choose appropriate parameter space and accordingly select BOD designs from Table 8 (in Appendix C). In the code parameter H_3 is selected.
3. Compile code is "Table6_Output.m" that produces the result.