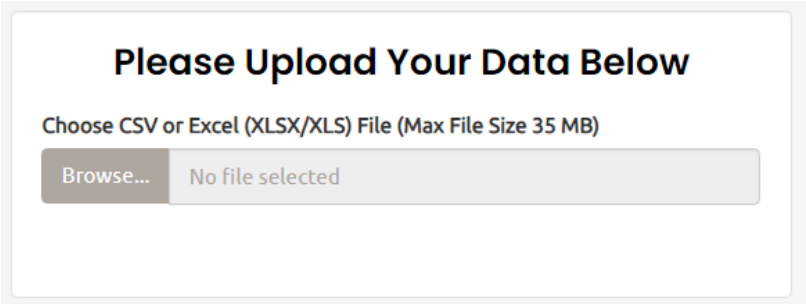
SEM ANALYSIS

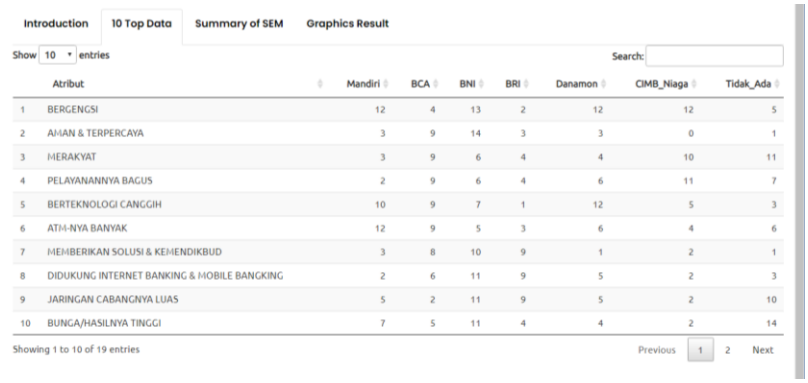
SEM (Structural Equation Modelling) analysis is a multivariate statistical analysis technique used to analyze structural relationships. This technique is a combination of factor analysis and multiple regression analysis, and is used to analyze the structural relationship between the measured variables and the latent variables.

ANALYZING DATA USING SEM

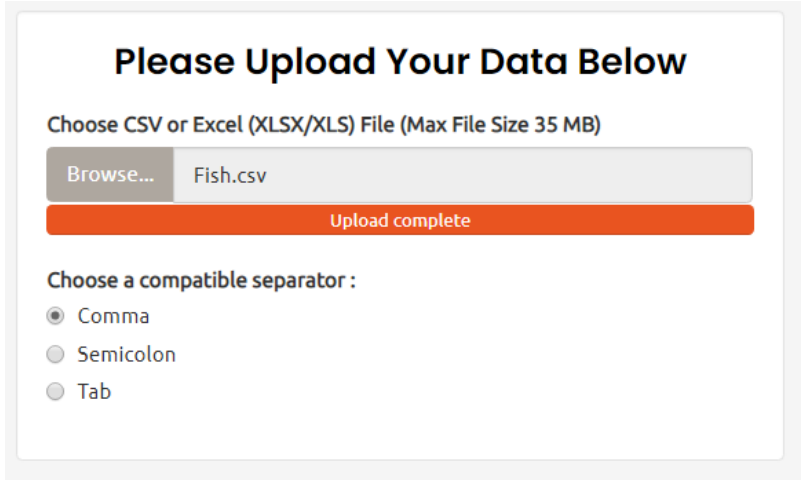
STEP 1: Uploading Your Data

1. On the upload panel, click Browse and select the data you want to upload. The app will automatically show you the data in “10 Top Data” section.



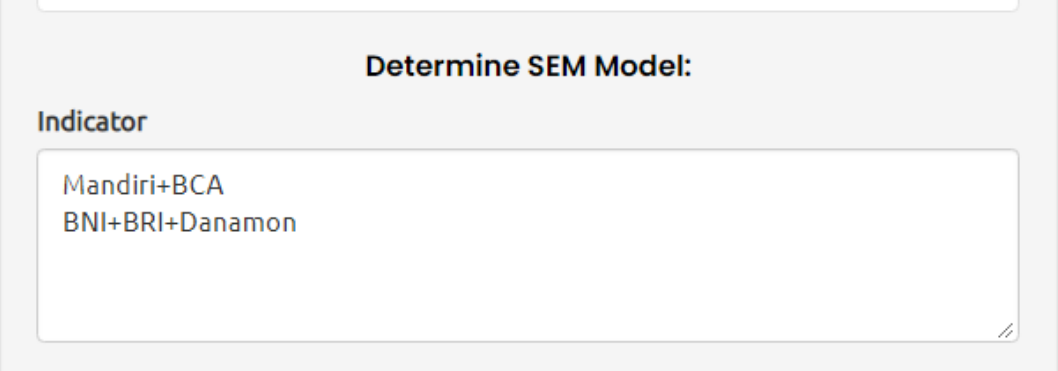


Note : If you select the data with **csv** format, you need to choose one of the three separators that are available in a selection. Make sure the separator is compatible with the data.



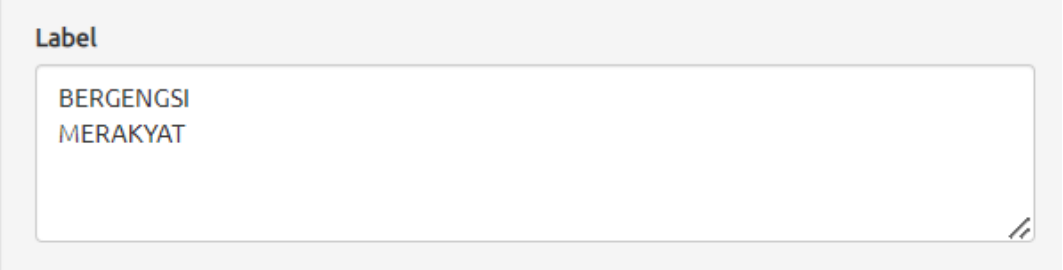
STEP 2: Determining SEM Model

1. Enter the model indicators in “Indicator” section.

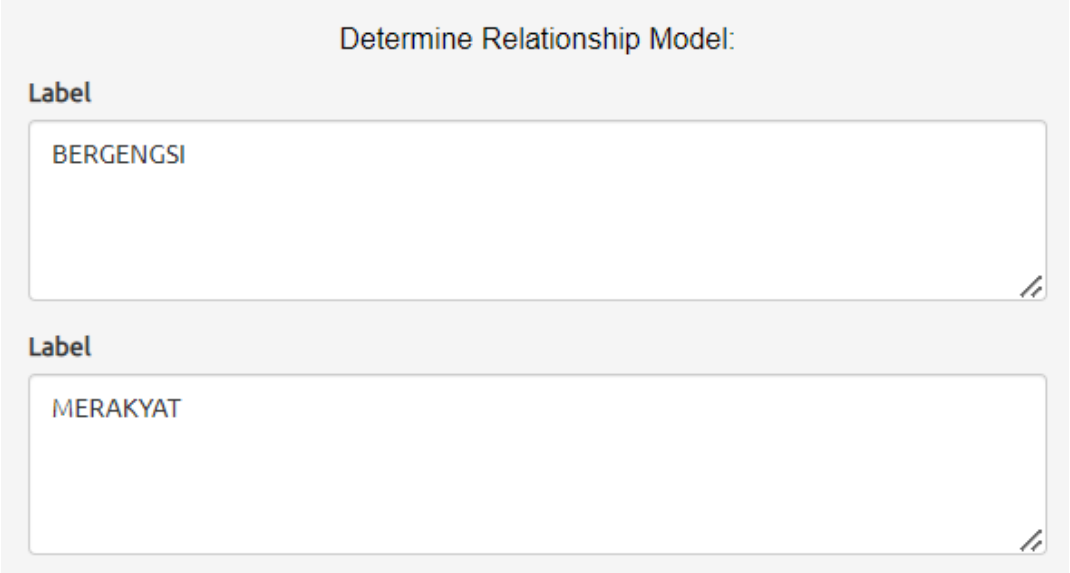


Note : Make sure the name of each variable in the model indicators is the same as the name of the variable in the data.

2. Enter the labels/latent variables (variable that cannot be measured directly) in “Label” section. In this example, Mandiri and BCA for the "BERGENGSI" variable and BNI, BRI, and Danamon for the "MERAKYAT" variable.

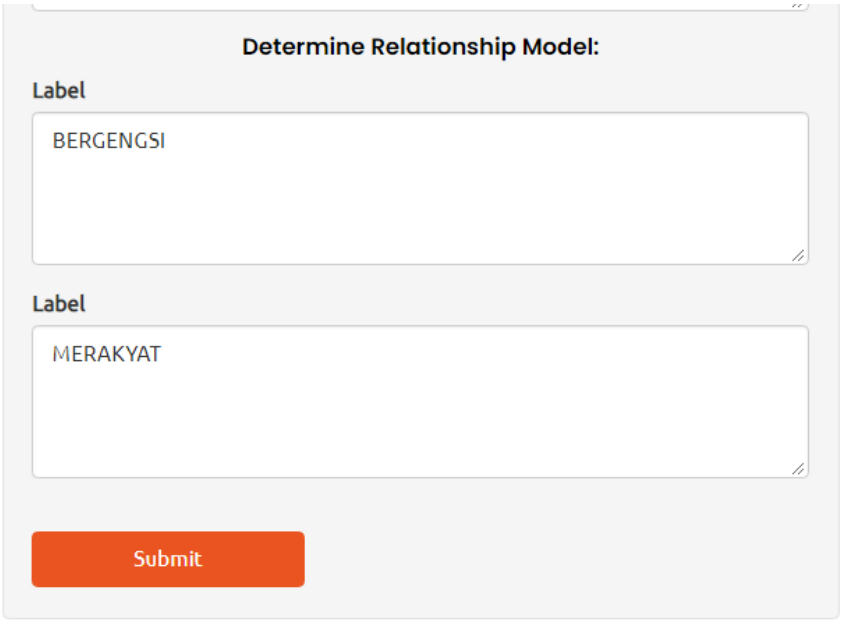


3. In the “Determine Relationship Model:” section, enter the labeling of the latent variable above. In this example no changes are made to the label of the latent variable.



STEP 3: Submitting Your Model

1. After entering the model, the submit button will be active and you can click it to show the results in “Summary of SEM” section.



Introduction | 10 Top Data | Summary of SEM | Graphics Result

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lavaan 0.6-10 ended normally after 147 iterations

  Estimator                                         ML
  Optimization method                           NLMINB
  Number of model parameters                        11

  Number of observations                            19

Model Test User Model:

  Test statistic                                 7.658
  Degrees of freedom                                 4
  P-value (Chi-square)                           0.105

Parameter Estimates:

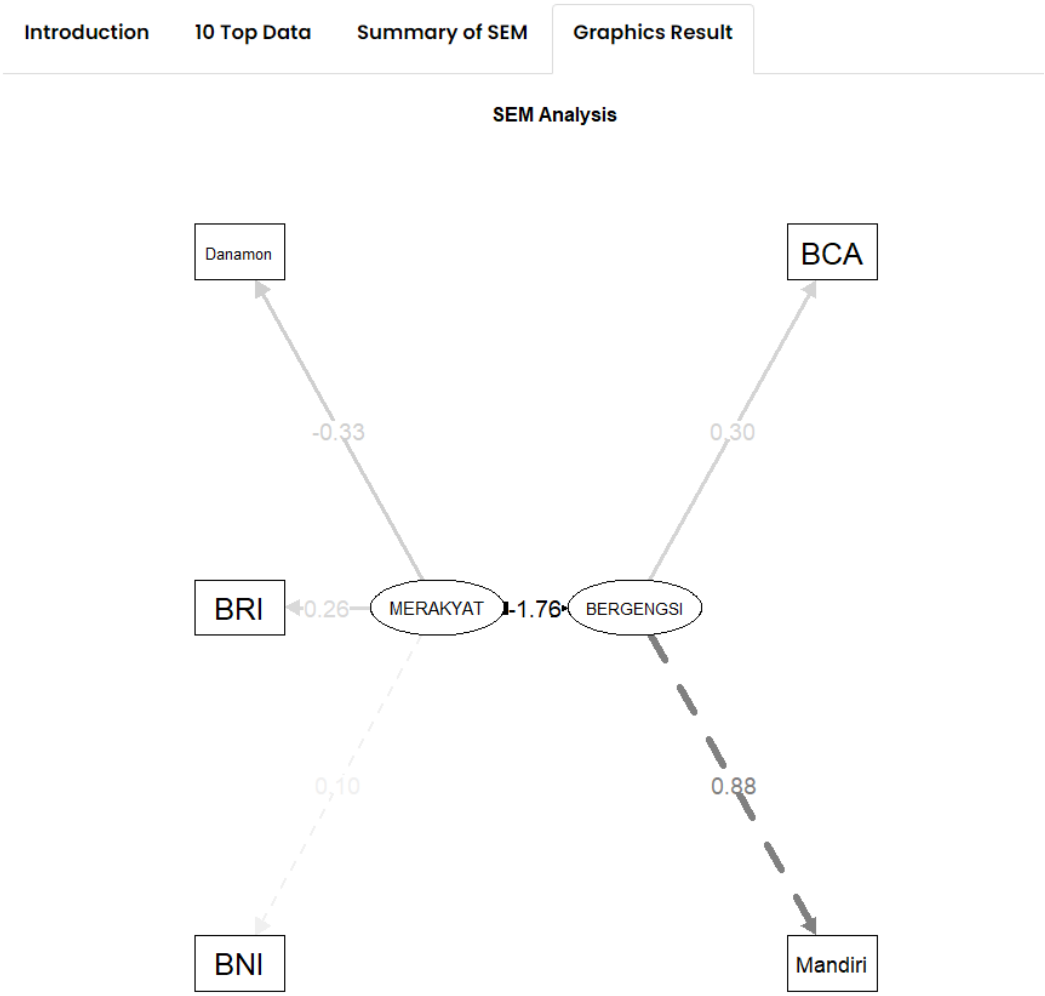
  Standard errors                             Standard
  Information                                 Expected
  Information saturated (h1) model          Structured

Latent Variables:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  BERGENGSI =~
    Mandiri           1.000                               3.243    0.880
    BCA               0.326    0.333    0.978    0.328    1.056    0.295
  MERAKYAT =~
    BNI               1.000                               0.413    0.104
    BRI               2.139    2.954    0.724    0.469    0.884    0.263
    Danamon          -2.540    3.435   -0.739    0.460   -1.049   -0.333

Regressions:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  BERGENGSI ~
    MERAKYAT        -13.849   35.831   -0.387    0.699   -1.764   -1.764

Variances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
   .Mandiri           3.052    8.467    0.360    0.719    3.052    0.225
   .BCA              11.661    3.887    3.000    0.003   11.661    0.913
   .BNI              15.514    5.015    3.093    0.002   15.514    0.989
   .BRI              10.471    3.715    2.819    0.005   10.471    0.931
   .Danamon           8.800    3.580    2.458    0.014    8.800    0.889
   .BERGENGSI       -22.199   65.566   -0.339    0.735   -2.111   -2.111
    MERAKYAT          0.171    0.614    0.278    0.781    1.000    1.000
```

2. You can also see the graphic result by clicking on the “Graphics Result” tab.



STEP 4: Downloading Results

1. The “Download Results” button will appear after the summary result are shown. Click it to export the results to your device in PDF format.