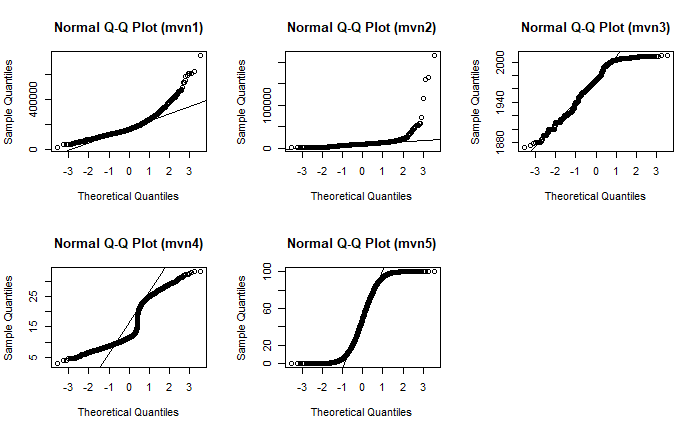
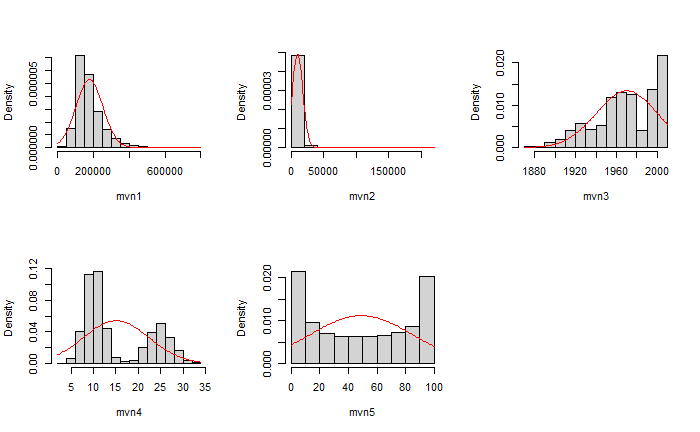
## Multivariate Normality

* None of mvn1-5 respect univariate normality, both according to the Shapiro-Wilk test (explain assumptions) and from visual inspection of the QQ plots.
  + Checked with MVN package (Korkmaz et al., 2014)
* Distributional characteristics:
  + Mvn1 positively skewed
  + Mvn2 is positively skewed and has a very large outlier -> check distribution after outlier removed
    - Skew and kurtosis are very large
  + Mvn3 is negatively skewed
  + Mvn4 is bimodal
  + Mvn5 is bimodal -> probably as a result of ceiling and floor effect.
* Skewness and kurtosis were calculated using Fisher’s formulas (Cain et al., 2017) implemented in the psych package (Revelle, 2024), although the results of all common formulas are indistinguishable in large samples such as this one (Joanes & Gill, 1998).





## Group Comparison

### Missing Data

## Preparing for Regression

## Repeated-Measures Screening

## References

William Revelle (2024). \_psych: Procedures for Psychological, Psychometric, and Personality Research\_. Northwestern University, Evanston, Illinois. R package version 2.4.6, <https://CRAN.R-project.org/package=psych>.

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**Joanes, D. N., & Gill, C. A. (1998). Comparing Measures of Sample Skewness and Kurtosis. *Journal of the Royal Statistical Society. Series D (The Statistician)*, *47*(1), 183–189.**