Contingency Tables

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# Key Concepts and Commands

# Flipping Two Coins

. clear all

. set seed 3846

. label define coin 1 "heads" 0 "tails" // define value label

. set obs 1000 // 1000 observations  
number of observations (\_N) was 0, now 1,000

. \* curiously it takes around 1000 obs for the proportions  
. \* below to "take hold"

. generate nickel = rbinomial(1, .75) // unfair nickel

. generate quarter = rbinomial(1, .5) // fair quarter

. label values nickel quarter coin // assign value label

. tabulate nickel quarter, row col  
  
┌───────────────────┐  
│ Key │  
├───────────────────┤  
│ frequency │  
│ row percentage │  
│ column percentage │  
└───────────────────┘  
  
 │ quarter  
 nickel │ tails heads │ Total  
───────────┼──────────────────────┼──────────  
 tails │ 104 140 │ 244   
 │ 42.62 57.38 │ 100.00   
 │ 21.62 26.97 │ 24.40   
───────────┼──────────────────────┼──────────  
 heads │ 377 379 │ 756   
 │ 49.87 50.13 │ 100.00   
 │ 78.38 73.03 │ 75.60   
───────────┼──────────────────────┼──────────  
 Total │ 481 519 │ 1,000   
 │ 48.10 51.90 │ 100.00   
 │ 100.00 100.00 │ 100.00

# Graphing

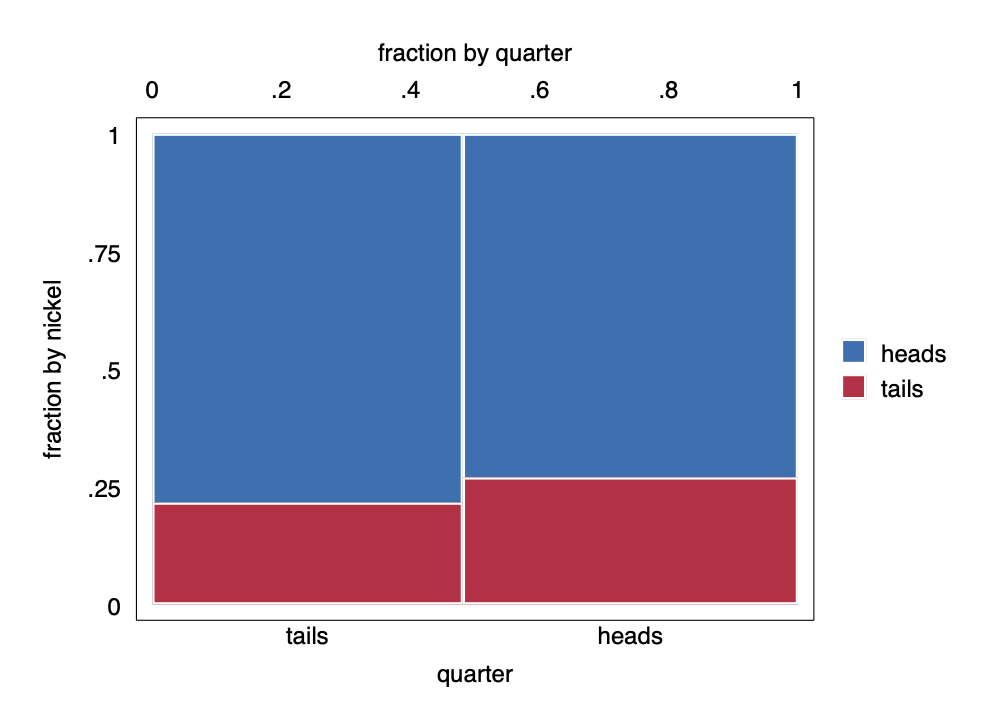
. \* ssc install spineplot // mosaicplots (spineplots)

. \* ssc install scheme-burd, replace // BuRd graph scheme

. spineplot nickel quarter, scheme(michigan)

. spineplot nickel quarter, scheme(burd)

. graph export nickel-quarter.png, width(1000) replace  
(file nickel-quarter.png written in PNG format)



Nickel and Quarter