Package ‘dmai’

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Type Package
Title Divisia Monetary Aggregates Index
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Description

Usage
## Default S3 method:
dmai(.data, method = c("Barnett", "Hancock"),
     logbase = NULL)

Arguments
- `.data` data.frame
- `method` Method to calculate Divisia monetary aggregates index, Barnett or Hancock
- `logbase` base of log to be used in Barnett divisia monetary aggregates index method, default is NULL or 10

Value
Divisia Monetary Aggregates Index

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References

Examples
```r
data <-
tibble::tibble(
  Date = paste(c("Jun", "Dec"), rep(seq(from = 2000, to = 2017, by = 1), each = 2), sep = "-"),
  x1 = runif(n = 36, min = 162324, max = 2880189),
  x2 = runif(n = 36, min = 2116, max = 14542),
  x3 = runif(n = 36, min = 92989, max = 3019556),
  x4 = runif(n = 36, min = 205155, max = 4088784),
  x5 = runif(n = 36, min = 6082, max = 186686),
  x6 = runif(n = 36, min = 11501, max = 50677),
  x7 = runif(n = 36, min = 61888, max = 901419),
  x8 = runif(n = 36, min = 13394, max = 347020)
)```
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,x9 = runif(n = 36, min = 25722, max = 701887)
,x10 = runif(n = 36, min = 6414, max = 37859)
,x11 = runif(n = 36, min = 11688, max = 113865)
,x12 = runif(n = 36, min = 2311, max = 23130)
,x13 = runif(n = 36, min = 23955, max = 161318)
,r1 = runif(n = 36, min = 0.00, max = 0.00)
,r2 = runif(n = 36, min = 0.00, max = 0.00)
,r3 = runif(n = 36, min = 0.00, max = 0.00)
,r4 = runif(n = 36, min = 0.93, max = 7.43)
,r5 = runif(n = 36, min = 1.12, max = 7.00)
,r6 = runif(n = 36, min = 0.99, max = 7.93)
,r7 = runif(n = 36, min = 1.51, max = 7.42)
,r8 = runif(n = 36, min = 2.20, max = 9.15)
,r9 = runif(n = 36, min = 2.64, max = 9.37)
,r10 = runif(n = 36, min = 2.80, max = 11.34)
,r11 = runif(n = 36, min = 3.01, max = 12.41)
,r12 = runif(n = 36, min = 2.78, max = 13.68)
,r13 = runif(n = 36, min = 3.23, max = 14.96)
)

Data$Date <- as.Date(paste("01", Data$Date, sep = ", "), format = "%d-%b-%Y")

# Divisia monetary aggregates index using Barnett method
DMAIBarnett <- dmai(.data = Data, method = "Barnett", logbase = NULL)
DMAIBarnett
DMAIBarnett1 <- dmai(.data = Data, method = "Barnett", logbase = 10)
DMAIBarnett1
DMAIBarnett2 <- dmai(.data = Data, method = "Barnett", logbase = 2)
DMAIBarnett2
DMAIBarnett3 <- dmai(.data = Data, method = "Barnett", logbase = exp(1))
DMAIBarnett3

# Divisia monetary aggregates index using Hancock method
DMAIHancock <- dmai(.data = Data, method = "Hancock")
DMAIHancock

library(ggplot2)
ggplot(data = DMAIBarnett, mapping = aes(x = Date, y = DMAI)) +
  geom_point() +
  geom_line() +
  geom_text(aes(label = round(DMAI, 2)), vjust = "inward", hjust = "inward") +
  scale_x_date(
    date_breaks = "6 months",
    date_labels = "%b-%Y"
  , limits = c(min(DMAIBarnett$Date), max = max(DMAIBarnett$Date))) +
  theme_bw() +
  theme(axis.text.x = element_text(angle = 90))

ggplot(data = DMAIHancock, mapping = aes(x = Date, y = DMAI)) +
  geom_point() +
  geom_line() +
  geom_text(aes(label = round(DMAI, 2)), vjust = "inward", hjust = "inward") +
Divisia Monetary Aggregates Index

Description

The dmai package provides functionalities to calculate Divisia monetary aggregates index as given in Barnett, W. A. (1980).

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