

micEcon

Microeconomic Analysis with R

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micEcon provides mainly tools for

- demand analysis with the “Almost Ideal Demand System” (AIDS)
- production analysis with the “Symmetric Normalized Quadratic” (SNQ) profit function
- Heckman selection models

micEcon provides some further tools for

- quadratic functions
- translog functions
- FRONTIER 4.1 (software for stochastic frontier analysis)
- Optimization using the Newton-Raphson and BHHH algorithm
- creating and modifying matrices

micEcon provides functions for

- econometric estimation using the
 - popular but inaccurate “Linear Approximation” (LA-AIDS)
 - accurate “Iterated Linear Least Squares Estimator” (ILLE)
- optional imposition homogeneity and/or symmetry
- checking for monotonicity and concavity
- price elasticities, income elasticities, and their standard errors
- ...

- specification of the variable names:

```
prices <- c("pMeat", "pFruit", "pCereal", "pMisc")
shares <- c("wMeat", "wFruit", "wCereal", "wMisc")
```
- estimation of the "Almost Ideal Demand System":

```
estResult <- aidsEst( prices, shares, "xFood",
  data = Blanciforti86 )
```
- printing estimation results:

```
print( estResult )
```

Estimation Method: Linear Approximation (LA)
with Laspeyres Index (L)

Estimated Coefficients

alpha

wMeat	wFruit	wCereal	wMisc
-0.248	0.123	0.273	0.852

beta

wMeat	wFruit	wCereal	wMisc
0.3251	0.0481	-0.0816	-0.2917

gamma

	pMeat	pFruit	pCereal	pMisc
wMeat	0.09104	-0.14571	-0.00963	0.0643
wFruit	-0.14571	0.15852	0.00594	-0.0188
wCereal	-0.00963	0.00594	0.01289	-0.0092
wMisc	0.06431	-0.01875	-0.00920	-0.0364

Demand Elasticities (Formula of Chalfant / Goddard)
Expenditure Elasticities

wMeat	wFruit	wCereal	wMisc
2.048	1.240	0.392	0.179

Marshallian (uncompensated) Price Elasticities

	pMeat	pFruit	pCereal	pMisc
wMeat	-1.032	-0.679	-0.172	-0.165
wFruit	-0.802	-0.257	-0.003	-0.179
wCereal	0.117	0.166	-0.822	0.147
wMisc	0.436	0.112	0.084	-0.811

Hicksian (compensated) Price Elasticities

	pMeat	pFruit	pCereal	pMisc
wMeat	-0.396	-0.269	0.103	0.562
wFruit	-0.417	-0.008	0.164	0.262
wCereal	0.239	0.245	-0.770	0.287
wMisc	0.491	0.148	0.108	-0.747

You are invited to provide
further tools for micEcon!

Thank you for your attention!