Package ‘EconDemand’

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Title General Analysis of Various Economics Demand Systems

Version 1.0

Imports stats, graphics

Description Tools for general properties including price, quantity, elasticity, convexity, marginal revenue and manifold of various economics demand systems including Linear, Translog, CES, LES and CREMR.

Depends R (>= 3.2.2)

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R topics documented:

  DemandPrice ................................................. 2
  DemandQuantity ......................................... 3

Index 4
DemandPrice  

*Price and General Properties Given Quantity*

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**Description**

Finds the prices and returns general properties when quantities are given of various economics demand systems including Linear, Translog, CES, LES and CREMR.

**Usage**

`DemandPrice(q, parameter, method, plot, message)`

**Arguments**

- `q` the quantity vector
- `parameter` the parameters of the economics demand system. When choosing CREMR demand, it should be three dimensional, otherwise it should be two dimensional.
- `method` the demand function used, can be one of Linear, Translog, CES, LES and CREMR
- `plot` a logical value indicating whether the manifold should be plotted
- `message` a logical value indicating whether an important message about the computed quantity should be printed

**Value**

- `price` the computed price
- `sales` the total sales (revenues)
- `elasticity` the elasticity of demand
- `convexity` the convexity of demand
- `marginal.revenue` the marginal revenues

**Examples**

```r
# Set quantity vector
quantity <- c(1, 1, 1.2)
# Use Translog Demand Function
X <- DemandPrice(quantity, c(10, 0.5), "Translog", plot=TRUE, message=TRUE)
# Return the prices
X$price
# Return the demand elasticity
X$elasticity
```
**DemandQuantity**

*Quantity and General Properies Given Price*

**Description**

Finds the quantities (outputs) and returns general properties when prices are given of various economics demand systems including Linear, Translog, CES, LES and CREMR.

**Usage**

```
DemandQuantity(p, parameter, method, Plot, message)
```

**Arguments**

- `p`: the price vector
- `parameter`: the parameters of the economics demand system. When choosing CREMR demand, it should be three dimensional, otherwise it should be two dimensional.
- `method`: the demand function used, can be one of Linear, Translog, CES, LES and CREMR
- `Plot`: a logical value indicating whether the manifold should be plotted
- `message`: a logical value indicating whether an important message about the computed quantity should be printed

**Value**

- `quantity`: the computed quantity
- `sales`: the total sales (revenues)
- `elasticity`: the elasticity of demand
- `convexity`: the convexity of demand
- `marginal.revenue`: the marginal revenues

**Examples**

```r
# Set price vector
price<-c(1,1.1,1.2)
# Use Linear Demand Function
X<-DemandQuantity(price, c(1,0.5), "Linear", Plot=TRUE, message=TRUE)
# Return the quantities
X$quantity
# Return the marginal revenues
X$marginal.revenue
```
Index

DemandPrice, 2
DemandQuantity, 3