Package 'EconDemand'

January 20, 2025

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)

License GNU General Public License version 2

Encoding UTF-8

LazyData true

RoxygenNote 5.0.1

NeedsCompilation no

Author Tianhao Wu [aut, cre]

Maintainer Tianhao Wu <tianhao.wu@yale.edu>

Repository CRAN

Date/Publication 2016-07-16 00:01:13

Contents

1

DemandPrice | *Price and General Propeties Given Quantity*

Description

Finds the prices and returns general propeties 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

```
#Set quantity vector
quantity<-c(1,1.1,1.2)
#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 Propeties Given Price*

Description

Finds the quantities (outputs) and returns general propeties 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

```
#Set price vector
price<-c(1,1.1,1.2)
#Use Linear Demand Function
X<-DemandQuantity(price,c(10,0.5), "Linear", Plot=TRUE, message=TRUE)
#Return the quantities
X$quantity
#Return the marginal revenues
X$marginal.revenue
```

Index