

# Package ‘EconDemand’

July 16, 2016

**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

## R topics documented:

|                          |          |
|--------------------------|----------|
| DemandPrice . . . . .    | 2        |
| DemandQuantity . . . . . | 3        |
| <b>Index</b>             | <b>4</b> |

---

 DemandPrice

*Price and General Properties Given Quantity*


---

### 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

```
#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 | <i>Quantity and General Propeties Given Price</i> |
|----------------|---|

---

**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

DemandPrice, [2](#)

DemandQuantity, [3](#)