Package 'competitiontoolbox'

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Type Package

Title A Graphical User Interface for Antitrust and Trade Practitioners

Version 0.1.3

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Depends R (>= 2.10), antitrust (>= 0.99.11), trade (>= 0.5.4), shiny,
rhandsontable

Imports ggplot2

Description
A graphical user interface for simulating the effects of mergers, tariffs, and quotas under an
assortment of different economic models. The interface is powered by the 'Shiny' web applica-
tion framework from
'RStudio'.

URL https://github.com/luciu5/competitiontoolbox

License Unlimited

Encoding UTF-8

LazyData true

RoxygenNote 7.1.0

NeedsCompilation no

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R topics documented:

1

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antitrust_shiny   *A Link to the Shiny Interface to the trade and antitrust Packages*

Description

Launch a shiny interface to simulate the effects of tariffs and mergers

Usage

```
antitrust_shiny()
```

Details

antitrust_shiny calls ct_shiny, which is a shiny interface for the antitrust and trade package. See ct_shiny for further details.

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ct_shiny   *A Shiny Interface to the trade and antitrust Packages*

Description

Launch a shiny interface to simulate the effects of tariffs and mergers

Usage

```
ct_shiny()
```

Details

ct_shiny launches a shiny interface for the antitrust and trade packages. The shiny interface provides users with the ability to calibrate model parameters and simulate tariff effects using many of the supply and demand models included in the trade package. It also provides users with the ability to calibrate different consumer demand systems and simulate the effects of mergers under different competitive regimes included in the antitrust package.

Author(s)

Charles Taragin, Paulette Wolak

Examples

```
if(interactive()){ct_shiny()}
```

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indicboxdata   *Box Plot Statistics for "Indices" Tab*

Description

A dataset containing the summary statistics necessary to make boxplots according to supply, demand, and percent of outside share for horizontal mergers. This allows for examination of the relationship between industry price changes and commonly used merger indices.

Usage

```
indicboxdata
```

Format

A data frame with 2,303 rows and 10 variables

Cut_type Firm Count, HHI, Delta HHI, UPP, CMCR, Harm 2nd, Party Gap

Cut_value axis units depending on Cut_type

shareOutThresh outside share threshold in percent (20–70)

Supply pooled, bertrand, cournot, auction

Demand pooled, log, logit, aids, ces, linear

high_wisk maximum

low_wisk minimum

pct25 25th percentile boxplot line

pct50 50th percentile boxplot line

pct75 75th percentile boxplot line

References

Taragin and Loudermilk 2019

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indicboxmktCnt   *Number of Monte Carlo Simulations Performed in "Indices" Tab*

Description

A dataset containing the information necessary to calculate the number of merger simulations used to generate the plots for the "Indices" tab of "Numerical Simulations" for Horizontal Mergers based on the index of interest.

Usage

```
indicboxmktCnt
```

Format

A data frame with 35 rows and 3 variables

Cut_type Firm Count, HHI, Delta HHI, UPP, CMCR, Harm 2nd, Party Gap

Cnt number of horizontal merger simulations (25,890 – 184,254)

shareOutThresh outside share threshold in percent (20–70)

References

Taragin and Loudermilk 2019

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sumboxdata   *Box Plot Statistics for "Summary" Tab*

Description

A dataset containing the summary statistics necessary to make boxplots according to supply, demand, and percent of outside share for horizontal mergers so as to examine the distribution of outcomes.

Usage

    sumboxdata

Format

A data frame with 180 rows and 10 variables

Demand log, logit, aids, ces, linear

Model cournot:log, cournot: linear, bertrand:aids, bertrand:logit, bertrand:ces, auction:logit

Outcome post-Merger index of interest (Industry Price Change (%), Merging Party Price Change (%), Consumer Harm (\$), Producer Benefit (\$), Net Harm (\$)

Supply bertrand, cournot, auction

high_wisk maximum

low_wisk minimum

pct25 25th percentile boxplot line

pct50 50th percentile boxplot line

pct75 75th percentile boxplot line

shareOutThresh outside share threshold in percent (20–70)

References

Taragin and Loudermilk 2019

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sumboxmktCnt *Number of Monte Carlo Simulations Performed in "Summary" Tab*

Description

A dataset containing the information necessary to calculate the number of merger simulations used to generate the plots for the Summary tab of Numerical Simulations.

Usage

```
sumboxmktCnt
```

Format

A data frame with 151 rows and 6 variables

Outcome post-Merger indice of interest (Industry Price Change (%), Merging Party Price Change (%), Consumer Harm (\$), Producer Benefit (\$), Net Harm (\$)

Cnt number of horizontal merger simulations

shareOutThresh outside share threshold in percent (20–70)

References

Taragin and Loudermilk 2019

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trade_shiny *A Link to the Shiny Interface to the trade and antitrust Packages*

Description

Launch a shiny interface to simulate the effects of tariffs and mergers

Usage

```
trade_shiny()
```

Details

trade_shiny calls ct_shiny, which is a shiny interface for the `antitrust` and `trade` package. See `ct_shiny` for further details.

Index