

Package ‘GmptzCurve’

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Type Package

Title Gompertz Curve Fitting

Version 0.1.0

Description A system for fitting Gompertz Curve in a Time Series Data.

License GPL-3

Encoding UTF-8

RoxygenNote 7.1.2

NeedsCompilation no

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Description

This function fits the Gompertz Curve in Time Series Data along with estimates of the parameters and predicted value.

Usage

```
gmptz(y)
```

Arguments

y a numeric vector

Details

The Gompertz curve is a type of mathematical model for a Time Series. It is a sigmoid function which describes growth as being slowest at the start and end of a given time period. The equation of Gompertz curve is given by , $Y=k*a^{(b^x)}$

Taking Logarithm on both sides we get, $\text{Log}Y=\text{Log}k+(b^x)*\text{Log}a$; OR, $Z=A+B(C^x)$, where $Z=\text{Log}Y$, $A=\text{log}k$, $B=\text{log}a$, $C=b$; It is a form of Modified Exponential. So ,now we can apply Method Of Group Average.

Value

a.hat , b.hat , k.hat : the estimated values of the parameters a,b and k.

predicted.value : the predicted values of y

Author(s)

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Examples

```
p=c(12, 15, 16, 18, 16, 21, 25, 27, 29, 30, 35, 36)
gmptz(p)
```

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